PHILOSOPHY

THE JOURNAL OF THE ROYAL INSTITUTE OF PHILOSOPHY

VOL. XXXII. NO. 120 JANUARY 1957

FEAR: ITS NATURE AND DIVERSE USES

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> "Fear has an ambivalent character, it may be beneficent or malignant, it may be Jekyll or Hyde."—D. K. Henderson, *Psychopathic States* (1939, p. 115).

THE "Hyde" character of fear has been so widely, and generally so exclusively, dwelt upon, that a review of what can be truthfully said in praise of its "Jekyll" character is, I trust, not untimely. I shall proceed on the assumption that all the natural passions, without exception, are essential, ineradicable factors in our human make-up, each allowing of both use and abuse. This, as I shall endeavour to show, is no less true of fear than of what we quite justly call the higher emotions.

Fear and unsatisfied desire are, it has been said, the twin sources of all unhappiness; and there are those who would represent fear as being the more formidable of the two evils, both as leading us astray in our pursuit of happiness, and as incapacitating us from enjoying it when brought within our grasp.

There are two periods in the world's history when this question has bulked very largely, alike in popular thought and in philosophical controversy—the Hellenistic Period in the ancient world and the Enlightenment period in the modern world. In the Hellenistic period there is practical unanimity—not surprising in view of the political and religious conditions of the centuries before and after the birth of Christ—that fear is a main source of evil. The Stoics, it is true, gave it second place: it is easier, they seem to have believed, to subjugate fear than to satisfy desire. The Epicureans, on the other hand, as naturally followed from their hedonistic standpoint, had no manner of doubt to which of the two sources of evil to assign the primacy, as is indicated by the refrain that recurs throughout Lucretius' poem, and which we meet again, in heightened form, in Montaigne's

declaration—surprising, surely, as coming from Montaigne—"the thing in the world I am most afraid of is fear."

A very similar attitude was adopted in the seventeenth and eighteenth centuries by those English and French thinkers who represented the newer tendencies of the times. While agreeing with traditional teaching so far as to hold that human nature in its existing forms is perverted and distraught, they singled out as the instrument of such perversion not pride, or love of power, or love of pleasure, but the obsessive and debasing influence of fear. Fear, in its present intensity, they maintained, is an extraneous influence generated in us by the agency of political institutions and of educational methods devised in the interest of kings and statesmen, and has been further unnaturally stimulated by the superstitious inventions of their allies, the priests.

Some of the responsibility for this teaching must be recognized as having lain with the representatives of the traditional views. And in especial we have to take into account the maleficent influence exercised by Hobbes. For it was Hobbes who, in upholding the old-time views, rested them upon a psychology in which fear, in its lower and least worthy forms, plays the leading part.

> "Hobbes got over the psychological facts which told against him either by treating them as exceptional, or by classifying every disposition which can restrain men from unsocial conduct as a form of fear. 'Pity ariseth from the imagination that the like calamity may befall himself,' the 'fear of things invisible is the natural seed of that which every man in himself calleth religion, and in them that worship or fear that power otherwise than they do, superstition.' "[1]

But to keep meantime to the Enlightenment thinkers. With few exceptions—Hume being one of the exceptions—they had but little understanding of the part played in the mental life by instinct and emotion. Emphasizing, as they did, the influence of social environment, and especially of education, they welcomed Locke's view of the mind as being at birth like a sheet of white paper, void of all characters. The only original tendencies which, as a rule, they admitted were the impulse towards pleasure and the aversion from pain. Society, they believed, acting through education, public opinion and government, can fashion the child as it pleases, generating this and that emotion, in this and that intensity, as prescribed by the needs of the social system. Fear, they contended, is the agency which has been chiefly favoured by the societies of the past; hence its present enslaving power. Men are born free; everywhere they are in chains, forged by their servile acquired fears.

Though nineteenth-century writers on educational and social topics have a more adequate conception of man's emotional equip-

[1] Graham Wallas: *The Great Society* (1914), p. 92.

ment, the great majority have continued to represent fear in a very unfavourable light. Thus Mosso, the Italian physiologist—the inventor of the plethysmograph and other psychological instruments —in his book, entitled *Fear*, does not hesitate to describe fear as a disease. Appearing in the animals as one of nature's many and strange devices for furtherance of its own supreme end, the preservation of the species, it has, Mosso contends, been so exacerbated, especially, as he claims, during the Stone Age, that it has since remained one of the main causes of the evils of human existence, generating insanities, phobias, and the various obsessions which account in particular for the unhappy history of religious belief and practice. "Let us remember," he remarks, "that fear is a disease to be cured; the brave man may fail sometimes, but the coward fails always."[1]

These writers, it may be noted, interpret fear as directed chiefly to what threatens life and limb, or more broadly, to whatever is painful. In their educational theories it is conceived mainly as fear of punishment, not as fear of proving unworthy and so of losing self-respect and the esteem of others. Being conceived in such narrow fashion, it compares unfavourably with the higher motives which they delight to set in contrast to it—love of the end sought and of the esteem of our fellows. Similarly in religion, it is represented as fear of punishment in an after-life, or at best as failure to face the cold hard truths of a scientifically enlightened philosophy, not as fear of the essentially evil or of failure in achieving the qualities of character in terms of which the religious spirit conceives of happiness.

Secondly, in their desire to emphasize the continuity of man with his animal ancestors, they give what is surely a very distorted account of our human make-up. Thus Graham Wallas would trace the origin of our fears back to the period when our fish-like ancestors disported themselves in the sea. In his *Human Nature in Politics* we find the following passage:

> "A man, whose life's dream it has been to get sight and speech of the King, is accidentally brought face to face with him. He is 'rooted to the spot,' becomes pale, and is unable to speak, because a movement might have betrayed his ancestors to a lion or a bear, or, earlier still, to a hungry cuttle-fish."[2]

But surely, what such an incident illustrates is not the grip which our marine ancestors still exercise over the nervous system, but the tricks which the imagination can play with us. The courtier who thus obtains sight of his king does not see before him in the king a fellow-mortal. His imagination is so filled with the splendours of

[1] Op. cit., in the English translation of its fifth Italian edition (1896), p. 278.

[2] (Published 1908), p. 34.

the nation's history that the king before him becomes their embodied symbol. He is dazzled not by what he sees, but by what imaginatively possesses him. His emotions are stirred as are those of a communist by the red flag. Is a communist thus stirred because red is the colour of blood, and therefore bound up with all the most exciting experiences of our animal and human ancestors? That may be a part of it, but if so only a quite minor part. The power lies in what is symbolized, not in the symbol denuded of its meaning. The red flag to its worshippers stands for the Utopia of their dreams.

Part of the case urged against fear consists in the contention that the child inherits quite definite fears of specific objects that have no real relevance to human or at least to modern life. Thus Stanley Hall in his *Study of Fears*, based on a questionnaire replied to by 1,701 persons, claims that there are 298 different things towards which man inherits atavistic fears; and he would have us agree that "reason always fears emotion, and is shocked by its outbreaks, and well it may be, for they mark the incursions of the race into the narrow life of the individual."[1]

The evidence, impartially weighed, seems very decidedly to point to the counter-conclusion that, in man at least, there are no *specific* atavistic fears. Unfamiliar or strikingly novel objects, sudden or sharp or very loud sounds, unexpected movements of anything in our environment, these appear to be the only sensuous stimuli capable of causing fear. All other causes of fear appear to be due to factors determined by the individual's own earlier personal experiences. The human race is not hagridden by the long-past experience of its animal and human ancestors. The mind of man is not a palimpsest all underwritten with savage tattoos. We have indeed come heir to a rich animal inheritance, but not in that crude fashion. The emotion of fear is automatically aroused only through the stimuli—the sudden, the abrupt, the unfamiliar, all of quite general character—the stimuli that must always have acted in order that the emotion may be of service in rendering adaptation to threatening dangers rapid and effective.

This appears to be true even of the animals. Unhatched chicks pecking at their shells will at once become quiescent if the mother-bird utters the danger-note; but they also do so upon any strange sound or shock. The cry of a hawk frightens birds, but so does any harsh, shrill or grating cry. If it be true, as has been asserted, that a horse becomes restive at the smell of a lion in a passing menagerie, this need not be because its ancestors, thousands of years before, while roaming wild, had it stamped in upon their nervous systems that this particular odour is a sign of the presence of an enemy; it is

[1] "A Synthetic Genetic Study of Fear" (*American Journal of Psychology*, 1914, p. 183).

presumably only because this particular horse has never before smelt this particular odour, and therefore is startled by its unfamiliarity, just as any of us may be by a sudden movement. Blind kittens show fear at the smell of a dog; but they also do so, as experiment shows, at any strong odour, such as ammonia.

There is, however, one type of fear which is at once highly specific, and yet apparently not explicable in terms of the individual's past experience. I mean those fears which are popularly entitled fears of the supernatural—fears to which, probably, most, if not all of us, are in some degree subject, the feeling of the eerie and uncanny, the sense of oppression, easily yielding to panic, which is especially liable to be aroused in the dark and when the individual is alone.

By general admission, it is impossible to explain these fears by reference to our animal ancestors; and this is why the Stone Age has been assigned so important a role in the naturalistic treatment of the emotional life. And it may at once be allowed that in the period when man was in process of becoming man, profound changes must have taken place in his mental endowments, and that he lay open to new and unfamiliar dangers, which to his dawning intelligence and widening imagination *may* (we have no precise information on the point) have given to the emotion of fear an exaggerated and unwholesome intensity.

But it is further contended that the fears, thus unwholesomely intensified, generated religion, and that religion, once invented, reacted upon the fears, extending their range still further and multiplying their forms, until we are presented with the spectacle of a race of beings not satisfied with the very real dangers that encompass them on every hand, but duplicating them by imaginary terrors of a fanciful character, complicating their existence to a degree that finds no parallel in any other living species—a complication which still constitutes, it is maintained, the chief barrier to a healthy-minded amelioration of life.

In this naturalistic explanation several points call for notice. First, the vagueness of the explanation. Located in the Stone Age, regarding which, on the side of *mental* history, we know so little, it is, by the nature of the case, unsupported by independent evidence. The one point that alone stands out clearly is the tacit admission that at this stage in human development there occurred a transition from animal existence to that which is specifically human, and that with this transition is also bound up the first beginnings of the religious view of life, the history of religion and the history of man being coextensive.

Secondly, "exacerbation of our *animal* fears" is a very inadequate description of what by admission has actually taken place. A quite new set of fears, directed to a new set of objects, now makes its

appearance. On the naturalistic view these fears are altogether unreal and imaginary; and yet once conceived acquire even greater influence than fears of actual dangers. This recognition of the part which imagination plays in human life we may welcome; but its sudden introduction, to carry the naturalistic theory over a difficult bit of the road, is somewhat surprising.

Thirdly, we may question the legitimacy of singling out one specific factor, such as fear, and of laying upon it the burden of accounting for the transition to a religious and therefore metaphysical interpretation of life. Such procedure is in keeping with the naturalistic philosophies whose usual tendency is to analyse the complex into its elements, and to treat the elements as more operative than the compound they constitute. That emotion plays a more important part than intellect or even imagination, in the beginnings of religion, can hardly be doubted, but the emotion at work, while involving fear, is much more complex. It is the emotion of awe, an emotion into which there would appear to be almost no human factor that does not enter. That to which it is directed both attracts and alarms; it is an object of worship as well as of self-abasement. Peculiar to this type of experience is a sense of being drawn—*in spite of fear*—to the object which is arousing it, leaving us with the desire for further experience of it. The experience is inexplicable in the absence of fear, and yet involves, in some measure, a transcendence of fear. The emotion is, indeed, so distinctively and exclusively human, that to understand it we must have understanding of the self as a whole. And if this be so, the naturalistic explanation of the origin of religion through fear breaks down. To explain the possibility of religion we need to postulate something else than *animal* fears; and yet when we have such *non*-animal fears as we find in the emotion of awe, the religious attitude has already been adopted.[1]

Setting aside, therefore, all specific fears, as arising only through the individual's own experience, let us consider fear in general. Can it be regarded as an emotion which was necessary so long as men were placed in an environment threatening to life and limb, but really an anachronism under present civilized conditions, or at least of an intensity out of all proportion to practical needs?

There is universal agreement that fear in its milder forms, when it is little more than surprise or expectation, gives just sufficient shock to the nervous system to arouse its energies, and to render it sensitive to all signs of possible danger. On the bodily side it achieves these ends by a reflex contraction of the blood-vessels and a quicken-

[1] In Hebrew the same word is used to cover both fear and reverence. Moffatt has therefore felt justified in substituting for the traditional translation of Psalm 111, 10—"Fear of the Lord is the beginning of wisdom"—"The first thing in knowledge is reverence for the Eternal."

ing of the heart-beat. Thereby the blood is withdrawn to the nerve-centres and driven more quickly through them. The nerve-centres are thus stimulated, and reserve energies set in readiness for immediate use.

Those psychologists, however, who assert that the emotion of fear is largely irrelevant to civilization claim that fear tends to be of such intensity as to thwart its own ends. The body gets out of hand; the heart beats more wildly and rapidly than is necessary for stimulation of the nerve-centres, and in consequence of excessive contraction of the blood-vessels disturbances are caused in the glands and viscera in all parts of the body, the skin perspiring a cold sweat, the mouth becoming dry and the voice hoarse; and as these disturbances spread, the body loses its alert posture, the muscles and even the skin tremble, and the eye and ear lose the power of distinct perception.

Thus fear, in proportion as it is intense, would seem to interfere with delicacy and precision of movement, and with clearness of perception. The greater the danger, the more ill-adapted and hurtful it would appear to become in its manifestations. Such manifestations, it is argued, are symptoms of disease. And when to the reckoning we add the wider range and greater intensity which fear acquires in a man through the free workings of imagination and thought, we would seem constrained to recognize that in fear Nature has over-reached herself, and has given birth to a vampire which feeds on our vitals, just as it has done in devising, with elaborate ingenuity and disastrous effectiveness, the life-cycle of the malarial mosquito.[1] Fear, that is to say, is conceived as a sort of mental disease with which human nature has, by some perverse accident or evil fate, become inoculated, and which we are summoned to eradicate, by guarding children from fear as from infection, by re-editing our literature, especially that of the young, and by substituting persuasion for authority in School and State. Some such view of fear, however qualified and restated, is indeed now, as in the eighteenth century, an almost invariable concomitant of humanitarian teaching in its secularist forms; and the fallacy which lies at its root is, I shall argue, that most frequent of all the sources of false reasoning, an arbitrary and unduly narrow selection of the data to be considered. Fear does indeed rule over the night-side of life, being the source of many psycho-pathic ailments, major and minor, as well as of the fret and worry to which even the most healthy-minded must occasionally succumb. But have those who thus disapprove of fear ever asked themselves what the starving of its legitimate forms would involve, and whether its elimination from our human make-up would not carry with it such emotions as shame, respect, reverence and awe?

[1] Cf. Sherrington, *Man on his Nature* (1940), pp. 367 ff.

In raising, therefore, the direct question—what is the nature and what are the proper functions of fear?—I would first draw attention to the complexity of our motives of action. The influences, reasoned and unreasoned, conscious and subconscious, which determine our conduct at any one moment can seldom, if ever, be completely analysed, at least not in such manner as to enable us to say with certainty that such and such motives alone decide it. There is a corresponding complexity in the emotional life. No single emotion, it would seem, is ever experienced by itself, unmodified by other emotions congruent or incongruent with it. Hatred, for instance, may be qualified by respect, intensified by jealousy, or coloured by contempt. To take fear itself: consider through what a remarkable range of variations it may pass while still maintaining its generic character. Fear of physical pain, fear of social disapproval, fear of losing the esteem of those we most respect, the mother's disinterested fears for the physical and spiritual welfare of her child, the politician's fears for the success of his party, the patriot's fears for his country's future. The list, to be complete, and to be adequate, would have to divide each of these fears into groups according to the complexity of the concurrent emotions which contribute to intensify, to modify, and to articulate them.

I may here make use of A. F. Shand's theory of the emotions, as expounded in his book entitled *The Foundations of Character*.[1] He has there discussed the nature of the emotions with full recognition of their complexity and variability, and of the manner in which each of them functions only in subordination to the conditions supplied by the organized self, on the various levels of the mental life. Shand develops his theory of the emotions in opposition to what was then the current view, as represented by William James, McDougall, Westermarck and others, that is, in opposition to the view that each fundamental instinct is rigidly attached to a primary emotion, and each primary emotion to a particular instinct. On Shand's view the mental correlate of instinct is not emotion but impulse. Emotion is more complex than impulse; and its function is to co-ordinate all the various instincts and impulses which can in any particular case be of service in adjusting the self to what arouses the emotion. Thus fear may organize in its service the instinctive reactions either of flight, or of hiding and keeping silent, or of desperate resistance. And though in the last-named form, fear frequently acts by first awakening anger, the anger is then a supplementary emotion arising alongside the fear and acting in its service. And fear itself in turn enters as an element into those more complex emotions which may be entitled sentiments, such as shame, respect, reverence and awe.

[1] Though published in 1914, with a second edition in 1920, it has, it would seem, never yet received the attention it deserves.

To understand the emotion of fear, we have therefore to determine its relation to our instincts on the one hand and to our sentiments on the other. Its relation to instinct is twofold. In fear impulsive tendencies are at once excited and obstructed. That which arouses fear must call for action, but the occasion of the fear must also at the same time, in all save the simplest and most usual dangers, come before consciousness as something which cannot be evaded with ease and certainty. That is to say, while fear calls for action, it also calls for caution and circumspection; and these two features are at variance with one another. In the one aspect the emotion presses towards action; in the other it checks action, and throws the individual back upon himself, imposing the delay required for reviewing the situation. In other words, the same emotion at once stimulates and checks; and this is the explanation of its seemingly ambiguous character as protecting against danger and yet as tending to destroy presence of mind. It seems to check the very activity it excites. Consequently its nature can only be defined through opposites. Fear is at once prompt and very wary, at once impulsive and deliberate. Its impulsive aspect reduces to the various instincts which fall within it; as emotion it at once arouses these diverse instincts and holds them in leash. So long as fear lasts, it marks a state of tension[1] or conflict: the release of the tension is always in favour of certain instincts which until the moment of release are balanced by others. Thus fear, to this extent, frees us from the tyranny of any one instinct. As Plato has said, courage calls for right knowledge of the things to be feared. That is to say, courage is not the absence of inner tension and strain, but the resolving of it in the manner which the self, when unstrained, would choose deliberately and upon full reflection.

But I must carry the analysis of fear a step further. I have described its ambiguous dual nature, but I have not yet stated its diverse uses.

It is a general psychological law that, accompanying circumstances permitting, we spontaneously attend to what is pleasant, and withdraw attention from what is painful. Were everything detached from everything else, this law might be accepted as the rule of life. But since we prefer certain ends to others, in adopting these ends—if we are to succeed in our pursuit of them—we have likewise to accept all the necessary labour, frequently disagreeable, thereby demanded. Consequently, in order that life may be consistent and progressive, we have to work counter to the general law, attending to the painful so far as our wider ends demand. How is this psychologically possible? If all pleasure tends to further atten-

[1] Cf. Dean Acheson, *An American Vista* (1956): "Tension is bad for people with weak nerves, but very little is ever accomplished without it."

tion, and all pain tends to suppress or thwart it, how is attention to the disagreeable ever secured?

The means are supplied by the emotions and sentiments, acting under the general control of the will. Were pleasure and pain the only lieutenants to which an agent could look for aid, even animal life, in its higher forms, would not have been possible. "The spirit whether of brute or man is impotent of accomplishment unless it have emotion. Without emotion could a bird build its nest?"[1]

In this connection, it is all-important to take account of a distinction of which professional psychologists make little use, but which is well known to writers on religion—it is emphasized by Cardinal Newman—between the softer and the more astringent emotions. The softer, or as they may also be named, the positive emotions, love in all its forms, as liking, affection, parental love, are invariably themselves pleasant in character. The astringent emotions, on the other hand, such as fear and hatred, are in themselves painful. Now "the will," which, properly understood signifies not a separate faculty of the self, but the self as agent, i.e. the total self *qua* active, is enabled, thanks to the assistance afforded by the astringent emotions, to meet the calls made upon it by the positive emotions. I have already made reference to the complexity of the emotional life, and the relation in which the astringent stands to the positive emotions is a particularly interesting illustration of this. The astringent emotions never, it would seem, act independently of the positive emotions and sentiments. We feel fear only of that which endangers what we cherish, just as we hate only what threatens or thwarts us in the ends we are pursuing. Fear holds the painful before consciousness, and keeps it there until the difficulties or dangers which arouse the fear have been removed or avoided. The positive emotions are thus reinforced by such other emotions as are relevant and helpful to them; and in all great and critical enterprises it is in fear that they find their first, or at least their readiest, lieutenant. It then awakens alert, imperative and circumspect, to stir the flagging energies at every turn, adding its own primitive intensity and momentum to the positive emotions in whose service it has been enlisted. Mosso, and his like, are in the right when they contend that fear is the most soul-shaking of all the emotions; and this is what enables it to be an invaluable ingredient in many emotions and sentiments to which it does not give its name.

Thus I have already in large part answered my second question: how fear stands related to the sentiments. In proportion as civilization develops, fear as a reaction to purely sensuous stimuli, i.e. as warning us against physical dangers, though still indispensable, becomes of relatively subordinate importance. Nature, however,

[1] Sherrington, op. cit., p. 401.

delights to adapt existing organs to novel uses, rather than to multiply new ones; and fear is a supreme example of the spiritual employment of what in its first appearance is a strictly natural device. In the sentiments it acts in the service of the positive emotions, reinforcing them with its own primitive intensity, and adding to their softness and sweetness the astringency necessary for their own proper fulfilment.

In support of this view of the function of fear, we have Wordsworth's account, in the *Prelude*, of the influences which presided over the development of his mind. As Wordsworth's testimony is, I think, quite remarkably illuminating, I shall dwell upon it at some length.

> "Fair seed-time had my soul, and I grew up
> Fostered alike by beauty and by fear."

Looking back he recognized that natural beauty had produced in him as a child peace and delight. "Even then I felt gleams like the flashing of a shield." But, as he found, even then it was fear which had exercised the deeper awakening power.

To appreciate the extent of Wordsworth's surprise at this discovery we must bear in mind the attitude which he had for a time been led to adopt in his earlier Godwinian period. According to William Godwin, his philosophical mentor at that time, emotion, no matter in what form it presents itself, is a dangerous and perverting influence. Take the examples which Godwin cites. Gratitude leads us to discriminate unjustly. It leads children to prefer their parents to other worthier people. With it also many of the evils of misgovernment are inseparably bound up. Is not gratitude for past or prospective services the politician's excuse for his worst jobberies? Similarly pity can distort our judgment and remorse weaken it. And as regards fear, is it not the instrument by which the despot and the priest hold their victims in helpless vassalage? Reason is the sole reliable, and by itself a sufficient incentive to action. As moral agents our duty, according to Godwin, is in face of each specific situation, without preconception or prejudice, and in a quite impersonal manner, by pure reason, to judge what is best in the given circumstances. If we allow our actions to be influenced in any degree by feeling and emotion, we hand ourselves over to influences which are all too likely to pervert and mislead.

When Wordsworth, bemused by this philosophy, began to come to himself and to realize the part which feeling and emotion actually play, and rightly play, in human life, he was filled with amazement. Human nature, as he found, is so much more complex, and in its workings so much more mysterious than Godwin had led him to believe. Many of Wordsworth's poems are, of course, directly attributable to this discovery. Gratitude he found in Simon Lee in an

utterly disinterested and indeed pathetic form, and hence his poem of that name. The affections attaching to private property, the cause as Godwin had taught, of so many vices and of so much misery, Wordsworth discovers to be closely interwoven with the noblest feelings of the heart; and hence his poem "The Last of the Flock."

But what amazed Wordsworth most of all—he is constantly remarking upon it—was that fear, which for Godwin is the most debasing and enslaving of the emotions, should on occasion not only have a useful function, but should, in certain of its uses, turn out to be one of the supremely beneficent forces in human life. The strangeness of this leads Wordsworth again and again to exclaim upon the mysterious character of our human powers.

> "Oh! Mystery of man, from what a depth
> Proceed thy honours!
> . . . there is a dark
> Inscrutable workmanship that reconciles
> Discordant elements. . . ."

Fear, he has discovered, is one of the "hiding-places of man's power," releasing us from the trivial but absorbing preoccupations of ordinary life, and thereby awakening us to consciousness of our deeper needs.

Wordsworth cites four special occasions on which fear was aroused in him as a child; and records them as critical turning-points, whose influence persisted his life long. The first, in the order in which he relates them in the *Prelude*, occurred when, one summer evening, having stolen a boat, he rowed out upon Esthwaite. He guided his course by the crest of a ridge; and as he rowed away

> ". . . from behind that craggy steep till then
> The horizon's bound, a huge peak, black and high,
> As if with involuntary power instinct,
> Upreared its head."

Panic fear then suddenly descended upon Wordsworth's childish spirit. With trembling oars, he turned and moored his bark.

> "And through the meadows homeward went, in grave
> And serious mood; but after I had seen
> That spectacle, for many days, my brain
> Worked with a dim and undetermined sense
> Of unknown modes of being; o'er my thoughts
> There hung a darkness, call it solitude
> Or blank desertion. No familiar shapes
> Remained, no pleasant images of trees,
> Of sea or sky, no colours of green fields;
> But huge and mighty forms, that do not live
> Like living men, moved slowly through the mind
> By day, and were a trouble to my dreams."

In this, as in the other cases, it was not, Wordsworth is careful to indicate, in the first panic-producing onset of the emotion, but in its after-effects, in the ground-swell, so to speak, that followed upon it, that the mind profited by the experience. As already noted, fear is the most soul-shaking of all the emotions; and as Wordsworth here relates, the ground-swell which it had generated lasted for several days, and revealed its continuing presence even in his dreams. As thus persisting, it gave to all the experiences which it accompanied an unwonted intensity and vividness which made them stand out in the memory with a freshness and a power not otherwise obtainable.

His meaning is made clearer by his description of another kind of experience—the fear awakened while climbing on high places during his boyish bird-nesting expeditions. The fear, though in this case of mild intensity, acted, he tells us, as a pleasurable stimulant to all his mental powers, so that the sky and landscape no longer seemed to be the world of everyday experience, but to be magically transformed with a strangeness and beauty beyond the ordinary. And these experiences, also, were thus, through their strangeness and vivacity, under the stimulating excitability of the fear, indelibly stamped upon the memory, and so handed on as a permanent source of inspiration, as recollected in tranquillity, for later years.

The third instance, related in Book V, is made the more significant by being set by Wordsworth in immediate sequence to the passage in which he criticizes the educationalists who, finding their inspiration in Rousseau, would so supervise and guard the child, playing, as they believe, the part of a higher Providence, that, in Wordsworth's words,

> ". . . natural or supernatural fear,
> Unless it leap upon him in a dream,
> Touches him not."

> "When," he asks, "will their presumption learn,
> That in the unreasoning progress of the world
> A wiser spirit is at work for us,
> A better eye than theirs, most prodigal
> Of blessings, and most studious of our good,
> Even in what seem our most unfruitful hours?"

The incident, it may be recalled, was as follows. Wordsworth observed one evening, on the opposite shore of Esthwaite, a heap of garments, as if left by some bather. Long he watched as the darkness increased, but no one claimed them. The succeeding day a crowd had collected, and the bather was sought with grappling irons and long poles.

> "At last, the dead man, 'mid that beauteous scene
> Of trees and hills and water, bolt upright
> Rose, with his ghastly face, a spectre shape
> Of terror; yet no soul-debasing fear

Young as I was, a child not nine years old,
Possessed me, for my inner eye had seen
Such sights before, among the shining streams
Of faery land, the forest of romance.
Their spirit hallowed the sad spectacle
With decoration of ideal grace;
A dignity, a smoothness, like the works
Of Grecian art, and purest poesy."

The fourth incident is told in the Book XII, where Wordsworth is again speaking of those childhood's

"Spots of time
That with distinct pre-eminence retain
A renovating virtue whence . . .
. . . . our minds
Are nourished and invisibly repaired."

Riding over a moor, while still so young that he could scarcely hold a bridle, he had lost touch with the servant who was accompanying him. In fear, dismounting, he led his horse down the rough and stony moor till he came to a bottom where in former times a murderer had been hung in chains. On the turf the murderer's name was still inscribed in monumental letters. His preceding fears were immediately intensified. "Faltering and faint," he fled, and

". . . reascending the bare common, saw. . . .
A naked pool that lay beneath the hills,
The beacon on the summit, and, more near,
A girl, who bore a pitcher on her head,
And seemed with difficult steps to force her way
Against the blowing wind. It was, in truth,
An ordinary sight; but I should need
Colours and words that are unknown to man,
To paint the visionary dreariness
Which, while I looked round for my lost guide,
Invested moorland waste, and naked pool,
The beacon crowning the lone eminence,
The female and her garments vexed and tossed
By the strong wind."

The complete passage would take too long to quote: in it Wordsworth dwells further upon this incident and upon its influence through his later years. It stood out in his memory and had, as he says, a renovating virtue by which in later years he frequently nourished and repaired his spirit.

At the conclusion of the *Prelude*, Wordsworth, speaking of the beneficent influence of his sister Dorothy, exclaims:

"I too exclusively esteemed *that* love
And sought *that* beauty, which, as Milton sings,
Hath terror in it."

And in another passage, in which he is again referring to Dorothy,

he says she taught him "delicate fears." And speaking of how, throughout life, his spiritual freedom had been preserved and enlarged, he exclaims:

> "To fear and love,
> To love as prime and chief, for there fear ends

[i.e. Wordsworth clearly recognized the subordination of the astringent to the positive emotions.]

> Be this ascribed; to early intercourse
> In presence of sublime or beautiful forms,
> With the adverse principles of pain and joy—
> Evil as one is rashly named by men
> Who know not what they speak."

And so I am brought back to my main thesis, that fear, properly used, works in the service and under the control of the positive emotions.

It is true, of course, that the misuse of fear has done incalculable mischief, and has played havoc with a multitude of lives. But this perverting power it shares with much that is best in human nature. All that is darkest or most tragic in human history is bound up with those emotions which, when rightly directed, are also the highest. There are none of the higher emotions but have their dark side; and the extent of the evil which fear, when misdirected, admittedly can cause, instead of leading us to regard it as a disease ought, by all the analogies, rather to be taken as proving its fundamental and all-pervasive character, and to prepare us for finding that it is one of the elemental forces, for good as well as for evil—both for the greatest goods and for the greatest evils—with which human nature is endowed. Were it merely a diseased excrescence, to be lopped off, its influence would be more purely local, and more easily dealt with. Let there, therefore, be a dragon in every child's book of fairy tales; and let us abstain from eliminating the exciting incidents from such thrilling stories as that of "The Unhappy Man who could not Shiver and Shake."

It is understandable that those who take a purely naturalistic view of the self should tend to regard with disfavour any emotion or sentiment in which fear is an ingredient. If the purpose of life is to bring the self and the given environment mutually into adjustment, modifying the environment, so as to satisfy the self in a maximum degree, and limiting our desires to what nature, when thus controlled, can be made to supply, fear, in its present continuing intensity, may have to be viewed as an unhappy survival from the days when, in the infancy of physical and medical science, our capacity to guard against threatening evils was so much less equal to its tasks. But if, on the other hand, it be the very nature of

man to seek for more than his natural conditions themselves supply, and if these conditions through friction generate capacities which have no animal analogue, if every advance in human life reveals new tasks and dangers not previously discerned, and if these demand not merely further labours, but the sacrifice and undoing of much that was previously cherished, then fear may well be expected to widen its range in due proportion. The higher excellence, if higher in kind and not merely in degree, on first discernment alarms, and may even repel, quite as much as it attracts. If it sufficiently transcends our acquired standards of excellence, its approach will be heralded by fear no less surely than if it were an evil. It threatens the actual self, undermining the achievements upon which the self has hitherto prided itself—disclosing new and unanticipated labours, from the hardness of which the natural man inevitably shrinks.

To quote a typical expression of the older view at its best—the view which regards "fear" as the beginning of wisdom—from the magnificent opening chapter of Calvin's *Institutes*:

> "It is plain that no man can arrive at the true knowledge of himself, without having first contemplated the divine character, and then descended to the consideration of his own. . . . The eye, accustomed to see nothing but black, judges that to be very white, which is but whitish, or perhaps brown. . . . Hence that horror and amazement with which the Scripture always represents the saints to have been impressed and disturbed, on every discovery of the presence of God. . . . Of this consternation we have frequent examples in the Judges and Prophets; so that it was a common expression among the Lord's people—'We shall die, because we have seen God' . . . And what can man do . . . when fear constrains the cherubim themselves to veil their faces? This is what the prophet Isaiah speaks of—'the moon shall be confounded, and the sun ashamed, when the Lord of hosts shall reign'; that is, when he shall make a fuller and nearer exhibition of his splendour, it shall eclipse the splendour of the brightest object besides."
>
> (Allen's translation.)

Contrast with this the following passage, from Sir Oliver Lodge:

> "The range of art and of enjoyment must increase infinitely with perfect knowledge. This is the atmosphere of God. "Where dwells enjoyment, there is He.' . . . This is the way with the greatest things. The sun is the centre of the solar system, a glorious object full of mystery and unknown forces, but the sunshine is a friendly and homely thing, which shines in at a cottage window, and touches common objects with radiance, and brings warmth and comfort even to the cat."

The attitudes alike of Calvin and of Sir Oliver are indeed not a little over-strained; but surely that of Calvin is nearer to the truth. Sir Oliver's domestic interior, with his window looking out on a landscape bathed in the very temperate sunshine of our English climate, is a decidedly foreshortened substitute for the glories, hazards and sublimities of our terrestrial and cosmic setting.

Ought not those who regard fear as essentially evil to bethink

themselves what it is they are maintaining? They are declaring that the most soul-shaking of all the instinctive emotions is by its very nature so intrinsically evil that the energies which it releases can never be beneficially employed. If that be so, are we not committed to the conclusion that in the emotional life we must be prepared to reckon with a permanent and irremediable twofold loss. First, of the emotional driving-force which fear represents: it will be no more legitimate to tap this source of energy than to employ an opiate in the doing of the day's work. And secondly, part of the emotional energies supplied by the other emotions will have to be set aside for the suppressing of this most ancient, and on their own showing deeply ingrained, excitability of fear. On this pessimistic view, we are summoned to curse Nature that ever it was so ill-advised as to create and employ this dangerous, and insidiously obsessive, type of emotional incentive.

Do not these considerations suffice to show that fear, whatever be its past record, cannot be so irremediably evil as its critics, whether sentimental or naturalistic, have sought to make out? Is it not that they are so afraid of fear that they have never domesticated it, and therefore, unlike Wordsworth, have never got to terms sufficiently friendly to allow of acquaintance with its many redeeming qualities? Fear may be a very rough diamond; but it has the qualities of its defects, and how very sterling these are. Fear is, so to speak, very humble-minded, very teachable; so much so that it is ever on the look-out for a master wiser than itself; and when it finds such it is the most trusty of lieutenants. It is indeed precisely by its fearless use of fear that Nature has succeeded in evolving the most favoured of its creatures. For, as we find, it has not been by way of the nobler animals, so much less open to fear, but by way of the timorous inhabitants of the tree-tops that it has secured for itself the means required in the creation of man. Nimble-witted and highly excitable, they are also alertly distrustful. And it is on these foundations that Nature has built.

And now to draw my summary conclusions.[1] Fear, as I have tried to show, is the inevitable companion of all great and difficult enterprises. They require both tenacity and caution; and these fear is supremely fitted to supply. Its tenacity comes to it from the positive emotion in whose service it is acting. At the same time it is circumspect and open-minded. It is its nature to be ever on the watch. It is the very opposite of that complacent reliance on acquired powers,

[1] As helping to make good some of the many lacunae and other shortcomings in this brief review, I can refer the reader to Lord Moran's *The Anatomy of Courage* (1945), and to Paul Tillich's *The Courage to Be* (1952). As the latter indicates, there is no English word precisely corresponding to the German word *Angst*—a distinctive, highly complex, species of anxiety.

on past prestige, on previous success, which is so detrimental to further advance and to open-minded recognition of new issues as they arise.

But, it will be urged, the cultivation of this emotion must destroy legitimate self-confidence, engendering an anxious-minded preoccupation, not with the good but rather with the manifold evils by which it is threatened on every hand. This objection overlooks the fundamental fact, upon which I have been dwelling, that fear is aroused only in subordination to emotions and sentiments of an *opposite* character. That to which our affections are pledged is the determining ground of corresponding fears; and the intensity of these fears is proportioned to our positive attachment to the ends which are endangered. That is to say, fear in all its higher forms—fear properly directed and morally controlled, *disinterested* fear—operates within the complex emotional systems to which it is subordinated and in which its powers are usefully and effectively utilized. Love generates fear of whatever threatens the beloved; and these fears, rightly directed—no easy task, yet within our powers—do not weaken the love but intensify it; while it in turn, if appropriately guided under the control of the will, regulates them in such manner as to render them contributory to the ends in view. Fear, which engulfs the coward, is a source of valour in the brave.

And lastly, the emotions when thus controlled, diminish in crude intensity, while increasing in power. As organized in the more complex sentiments, they stabilize the mind, freeing it from the feverish and diffusive restlessness characteristic of the immature. They contribute to the fervour, while lessening the turmoil of the soul. The objective sources of our positive affections lie beyond the individual self, and yet none the less constitute the centre of gravity of the self, lending the mind serenity, and enabling it to gain control over those fears which all supreme ends must inevitably generate, and generate in greater degree and in higher intensity, in proportion as they are found to be bound up with and to concern the more immediate purposes of our practical and social life.

MY OWN FREE WILL

W. F. R. HARDIE

THE words "free will" have uses in ordinary talk as in "free will offering" and, most commonly, in the expression "of my (your, etc.) own free will." We all know what states of affairs make this expression applicable, and its standard use is defined by this application. Yet philosophers discuss, or used to discuss, whether the will is free, libertarians saying that it is and determinists denying this. Are they, or were they, asking whether anyone ever acts of his own free will? If so, the question asked was absurd. For from the fact that "of his own free will" has a standard use, and therefore an application, it follows that it is trivial to assert, and absurd to deny, that men will freely, that the will is free. This objection to the traditional question has been stated in a contemporary idiom. But the conclusion to which it points, that the problem was misconceived, is not, of course, new.[1] It is an old contention that to assert that all events have causes is not to deny that men are free agents; we think that there is an inconsistency only because we confuse causal necessity with external constraint, as though a man were acting under compulsion when he does something because he wishes to do it. Again confusion about the meaning of "possible" leads to the idea that universal causation would exclude the reality of choice. If what happens is causally determined, what does not happen could not possibly happen. But if a man has a free choice between alternatives, the alternative he rejects must have been possible. This temptation to think that

[1] The view that the freedom of a human agent is only as a result of confusion thought to imply that his actions are not necessitated is to be found in Hobbes (*Of Liberty and Necessity*, *Leviathan*, Ch. XXI) and in Hume (*An Enquiry concerning Human Understanding*, Sect. VIII). The contention has recently been restated and developed by Professor C. L. Stevenson in *Ethics and Language* and by Professor A. J. Ayer in his essay, "Freedom and Necessity," reprinted in *Philosophical Essays*. The argument that it is senseless to deny the application of an expression to the cases by reference to which its use is taught has been named by Professor J. O. Urmson The Argument of the Paradigm Case ("Some Questions concerning Validity" in *Rev. Int. de Philosophie*, 1953). This pattern of argument has been applied to "free will" by Professor A. G. N. Flew in an article, "Crime or Disease," in the *British Journal of Sociology* (1954) and again in his article "Philosophy and Language," in the *Philosophical Quarterly* (1955). It is inevitable that any new discussion of the topic should restate points which have often been made before. But to say this is not, of course, to depreciate the value of such restatements in new idioms and new contexts. A list of the chapters from recent books and the articles which I have discussed or mentioned in the course of this article will be found at the end.

freedom is inconsistent with universal determination is removed (it is said) when we see that to say that something is possible is to say that it is not excluded by some restricted set of factors known to the speaker. That we choose between possibilities open to us is not inconsistent with the principle that all events, including acts of choosing, have causes, just as the fact that it may or may not rain this afternoon does not imply uncaused showers. It is claimed that, if we follow carefully these and connected lines of thought, we can cure ourselves of any inclination towards an out-of-date indeterminism, and a no less out-of-date determinism, since the evanescence of indeterminism deprives determinism of its interest and its point. But there are still some who doubt the diagnosis or fail to respond to the treatment. If they are to justify their resistance, they must make it clear that they are not misled by any of the commonly noted confusions. My main object in this paper is to criticize some arguments which have been urged against indeterminism by contemporary philosophers. But I wish to begin by insisting on the plausibility of the view I reject, the view that the problem has been misconceived. I think that I can do this best by dwelling first on the standard use of the expression "of my (your, etc.) own free will."

The Oxford Dictionary gives the following account of what is meant by doing something "of one's own free will": "acting of one's free will or choice, and not under compulsion or constraint; determining one's own action or choice, not motived from without." The important words in this account are "not under compulsion or constraint" and "not motived from without." But the latter phrase needs elucidation, and the former is too narrow since not only the man induced by a command or a threat, but also the man induced by a bribe, can be said not to have acted of his own free will.[1] What we say of a man when we say that he has not acted of his own free will is that the action of some other person has caused him to be confronted with an object of desire or aversion but for which he would not have acted as he did. It may be objected to this definition that the interfering agent and act need not be a person or persons. The captain of a ship, for example, is compelled by a storm to throw his cargo overboard. But it is not equally natural to say that the captain did not act of his own free will; to say this suggests that he was threatened or bribed. Notice the following additional points which I have had in mind in suggesting the above amended definition. (i) The cumbrous phrase, "causing him to be confronted . . . etc.," is designed to exclude

[1] Cf. the passage quoted by the O. E. D. from Steele in *The Spectator*, No. 308. " . . . there is a custom in the case of making conveyance of a wife's estate, that she is carried to a Judge's apartment, and left alone with him, to be examined in private, whether she has not been frightened or sweetened by her spouse into the act she is going to do, or whether it is of her own free will."

the case where the intervention of the other person consists only in calling attention to aspects of the situation, or to consequences of possible actions, which would not have been noticed. To receive advice is not to be deprived of free will. (ii) It may be suggested that the cumbrous phrase could be replaced by an enumeration: "command or threat" for the object of aversion, "inducement or bribe" for the object of desire. But such an enumeration would not be exhaustive. If A makes it clear to B that his (A's) respect for B will become less if A acts in a certain way, this hardly amounts to a threat or to the offer of an inducement; but it is an interference, an attempt to exert influence, and more than just advice. (iii) The induced desire or aversion need not be the only motive. But it must be a necessary factor in the motive. To the suggestion that a man did not act of his own free will it is in order to retort that he would have done what he did even if he had not been ordered, threatened, badgered, bribed, flattered, overawed, etc. . . . (iv) The Oxford Dictionary, although not in the passage I have quoted, suggests "spontaneous" as a possible meaning of "free" in "free will." It may be suggested that what is denied by "of his own free will" need be only the intervention of a prompter. But to prompt is often also to exert influence; even a command may lurk behind the suggestion. Unless the suggestion were also an interference, in the sense I have described, we should not, I think, regard it as incompatible with "free will."

This account of the standard use of the expression "of his own free will" makes it clear that to deny that a man has acted of his own free will is not to deny that he has acted nor to deny that he has acted "of his own will or choice": a man may choose to obey a command, to yield to a threat or to accept an inducement. What is directly changed by the interfering agent is the situation in which action takes place, the alternatives between which choice is exercised. But, although "not of his own free will" does not or need not say this, there are cases in which it is at least plausible to deny that the man of whom it is said that he has not acted of his own free will has in fact acted "of his own will or choice": he may be a kleptomaniac; he may have been under the stress of physical or mental torture; he may have been under the influence of drugs or hypnosis; he may have been asleep. Such cases raise difficult questions about the boundaries of responsible conduct. It may well be that, when it is said that a man has not acted of his own free will, the phrase is sometimes intended to suggest or assert that, being in an abnormal state or under an abnormal stress, he was not, or was not completely, responsible, was not in the full sense an agent. But the consideration of these borderline cases falls outside the topic which I wish to discuss in this paper.

What we have now to consider is the question whether, when we have explained what is ordinarily meant by saying that a man has

done some action "of his own free will," we still have to face the further question which has in the past been at issue between determinists and indeterminists or libertarians. I suggest that, before would-be disputants start to discuss the alleged question, or the question as to the reality or propriety of the alleged question, they ought to record a quite firm agreement on the following three points.

The first is that freedom, in an important everyday use, is opposed to compulsion or interference and not to necessity or causal determination or predictability. To say of a man that he has acted of his own free will is not to deny, or to assert, that anyone who knows what he was thinking and feeling at the time could have foreseen with certainty that he would act as he did. In relation to the question, or alleged question, about determination or predictability this use of "free" and "free will" is non-committal.

The second point on which there should be agreement is that the mistake of thinking that the non-committal use of "free will" commits its user to indeterminism is a possible mistake. I referred to this point in my first paragraph, and now restate it. Our ordinary talk about actions implies that the alternative which a man freely rejects was a possibility. A could have killed B; for, if A had chosen to pull the trigger, B would have died. Professor Broad has suggested the expression "conditional substitutability" for this meaning of the statement that the action not done was a possibility. Now, when we say that the murder of B by A was a possibility, in the sense of conditional substitutability, we do not deny (or assert) that A's decision not to pull the trigger was necessitated. But, if we wished to deny this, a quite natural way of denying it would be by saying that the murder of B by A was a possibility. Professor Broad has suggested the expression "categorical substitutability" for this meaning of the statement that the action not done was a possibility. It should be agreed that a simple confusion between conditional and categorical substitutability is a possible source of indeterminism.

We have seen that, when we say that a man has acted of his own free will, we do not say that his action was one for which another was substitutable in the categorical sense (first point). We have also seen how the mistake of thinking that we do say or imply this might be made (second point). The third point on which, as I suggest, there should be agreement is that, in the case of at least some deliberately chosen actions, there is nothing in the facts which suggests, to anyone who avoids mere confusion, that some action not done was categorically substitutable. For example, when we reflect on a purely hedonistic choice between alternatives on a menu *à la carte*, we are not prone to deny that our choosing as we did was the only possible event in the circumstances.

Now it is natural, and not, I think, uncommon, to assume that

the indeterminist who subscribes to these three points is making dangerous, if not actually damaging, admissions. He is admitting that "free will," as we ordinarily use it, does not assert or imply indeterminism; that the mistake of thinking that it does could be caused by a definite confusion; and that, when we reflect on what it is to choose between alternative actions, we find nothing in the idea of such choice as such to support the idea that the alternatives are categorically substitutable for each other. But it is surely clear that the damage done to indeterminism by these so-called admissions may be very slight. The first would only be serious if it were the case that, if indeterminism were true, we should expect this truth to be conveyed by the use of the expression, "of my own free will." But since, as we have seen, this expression has a different function, such an expectation would not be reasonable. As regards the second admission, it is enough to make the obvious point that to show that a doctrine is capable of being supported by a bad argument, or held as the result of confusion, is not to show that there are no good arguments for it or that anyone who holds it must be confused. The third admission, although not necessarily damaging, is more important. For it follows from it that, if there is some characteristic of some actions which suggests the idea that they are uncaused and, in the categorical sense, need not have been done, this must be some characteristic more specific than that of being deliberately chosen. Our next step, therefore, must be to ask what kind of action, if any, suggests this idea.

What I have called interference sometimes makes difficult an action which would otherwise be easy. It is often right or reasonable to disobey an order, to disregard a threat or to reject a bribe. But it may be difficult in the sense that it cannot be done without an effort. The man who is interfered with may be justified in doing, under compulsion, what would otherwise be wrong or in omitting what would otherwise be right. It depends on the importance of the claim in question, on the status of the interfering agent and the penalty which he threatens to inflict, and on the magnitude of the effort involved if we are to persist against interference in trying to satisfy the claim. But, as Aristotle remarked, there are some actions such that a man may not plead that he was "compelled" to do them: "he should rather die having suffered the most terrible things" (*Nicomachean Ethics*, Bk. III, Ch. I). Now it is in regard to these difficult actions, so we are told, that the question suggests itself whether the agent could have tried harder than he did. Could the conscientious sentry who at last lets himself slide into sleep have made the effort which would have been needed to keep himself awake? Here we are not asking, so it is said, whether the sentry could, and would, have kept awake *if* he had been more strongly desirous of doing his duty

and more averse from punishment than he in fact was. We are asking whether, this desire and this aversion being just what they were and his craving for sleep being what it was, he could have made the effort. It is suggested that, although it would have been very very difficult, he could; that the more intense effort of will was categorically substitutable for the less intense effort which was all he in fact made. We are invited further to say that, unless this is true, the sentry did not fall asleep of his own *free* will and did not deserve blame or punishment. Thus we are confronted with the alleged testimony of our practical consciousness in favour of "free will" in the libertarian's sense. We must now proceed to the cross-examination of this witness.

The question whether the witness says what he is alleged to say must be kept separate from the question whether what he is alleged to say is true. Some philosophers deny that the experience of trying to do something difficult but desirable or obligatory carries with it, or suggests, a conviction of freedom in a sense correctly analysed by the doctrine of indeterminism or categorical substitutability. So far as I know all philosophers who deny that this doctrine is supported by an immediate practical conviction also reject the doctrine itself. Indeed very often their reason, or one of their reasons, for denying the existence of a conviction which supports the doctrine is that the doctrine itself is absurd or unintelligible. Of the philosophers who assert or admit the existence of a plain moral man's conviction which clashes with determinism only some are prepared to defend the truth of the conviction. Others make human nature internally discordant by holding that the conviction imposed on us by our nature as active moral beings is demonstrably or self-evidently false. This is a strange paradox. But the very fact that the conviction is held by them to be false adds weight to their admission that it exists.

I shall begin by quoting some representative statements of and about the alleged conviction. I shall then consider some objections, first to the assertion that such a conviction exists and secondly to the assertion that it is, or may be, true.

Sidgwick, in the *Methods of Ethics*, speaks, in the following passage, of a power to make difficult choices the exercise of which is not determined by the state of the agent's inclinations.

"We must conclude, then, that against the formidable array of cumulative evidence offered for Determinism there is but one opposing argument of real force; the immediate affirmation of consciousness in the moment of deliberate action. And certainly, in the case of actions in which I have a distinct consciousness of choosing between alternatives of conduct, one of which I conceive as right or reasonable, I find it impossible not to think that I can now choose to do what I so conceive, however strong may be my inclination to act unreasonably, and however uniformly I may have yielded to such inclinations in the past. This belief seems to me bound up with the belief that I *ought*, in the strictest sense, to choose any course; when I have ascertained the former to be

to any extent illusory, the latter is immediately restricted to a corresponding extent. I recognize that each concession to vicious desire makes the difficulty of resisting it greater when the desire recurs: but the difficulty always seems to remain separated by an impassable gulf from impossibility."

(2nd edition, (1877) Book I, Chapter V, pp. 55, 56).

Sir David Ross in Chapter X (Indeterminacy and Indeterminism) of *The Foundations of Ethics* (1939) asserts, or admits, that, in order to justify the notion of moral responsibility,

". . . what our natural thought craves for is some element in the self which can at any moment act *contrary* to the character it inherits from its past—can act, as it is sometimes expressed, in the line of greatest resistance" (250).

He points out that this craving would not be satisfied by Professor Wisdom's suggestion of an eternally pre-existing soul. I have called this an admission because the rest of the chapter is a sustained defence of determinism and an attack on inadequate anti-determinist arguments. Ross, like Sidgwick, is impressed by the scientific evidence for determinism. But he also maintains the self-evidence of a causal principle which he holds to be inconsistent with the claim of the moral man to break with his own past. He maintains further that much of our moral thinking, for example the stress laid on good habits and our reliance on the moral goodness of others (244, 245), favours determinism. He even goes so far as apparently, in one passage, to endorse the argument that an act which was free in the libertarian's sense, besides being "metaphysically impossible," "could have no moral value."

"It would have no value, because it would not be the result of any thought about the nature of the act, and of any consequent impulsion to do it. It would be an unintelligent and unmotived leap in the dark" (230).

Nevertheless Ross finds in the end that he is unable to eliminate indeterminism from his account of "our natural thought about responsibility" (251). On the final page of the book he expresses the opinion "that something like half of our ordinary thinking on moral questions implies a belief in the indetermination of the will, and something like half a belief in its determination" (328). Thus Ross has every motive for submitting "our natural thought" to stern and hostile cross-examination. But he leaves us with the contradiction unresolved.

Professor Broad dealt at length with the analysis of the notion of free will in his Inaugural Lecture (Determinism, Indeterminism and Libertarianism), delivered and first published in 1934 and reprinted in *Ethics and the History of Philosophy* (1952). His conclusions resemble those reached by Sir David Ross in at least two respects: Broad, like Ross, asserts or admits the existence of a natural conviction of moral freedom in a sense involving indeterminism; like Ross,

although for different reasons, he denies the truth of this conviction. He points out that "ought" and "ought not" can be used in senses which do not imply indeterminism. But in the following passage he distinguishes these uses from the "categorical ought," and maintains that any action which was "categorically obligable" would have to be "categorically substitutable."

"When I judge that I ought not to have done something which I in fact did, I do not as a rule seem to be judging merely that a person with higher ideals, or with a stronger and more persistent desire to live up to his ideals, would not have done what I did. Even when this is part of what I mean, there seems to be something more implied in my judgement, viz., that I *could* have had higher ideals or *could* have willed more strongly and persistently to live up to my ideals, where 'could' does not mean just 'could have, if.' Let us call this sense of 'ought' the 'categorical ought.' " (206, 207).

Broad proceeds to an analysis of what is involved in "categorical substitutability." He decides that this includes both a negative and a positive condition. The negative condition of its being true "that I categorically could have avoided doing this action" is that

"The process of my willing this alternative with this degree of force and persistence was not completely determined by the nomic, the occurrent, the dispositional, and the background conditions which existed immediately before and during this process of willing" (207).

This is Broad's formulation of indeterminism, and he proceeds to a detailed elaboration of the doctrine and then to an explanation of the "positive condition" of categorical substitutability. I shall return later to the alleged positive condition. At this stage I have been concerned only to show how, if Broad is right, the denial of determinism is involved in the plain moral man's convictions about his freedom to do or not do his duty.

The accounts which I have quoted, from Sidgwick, Ross and Broad, of the conviction of freedom alleged to be generated in us by the experience of agency have the following features in common: (*a*) they connect the conviction with the experience of doing an action which involves a greater effort of will than some other suggested and possible action; (*b*) they imply that, in the situations thus described, the more difficult action is always or usually thought of as a duty; (*c*) they hold that this freedom to will otherwise or more intensely involves, if it exists, the falsity of determinism (most fully defined by Broad) and must be distinguished sharply from the conditional freedoms, compatible with determinism, to act otherwise if we so will and to will otherwise if we so desire; finally (*d*) they agree in holding that the natural conviction the existence of which they do not doubt is certainly, or almost certainly, false.

The fourth and last account from which I shall quote, that given by Professor Campbell, resembles the three others in all these

features except the last: Professor Campbell thinks that the conviction is true, and claims to answer the objections brought against it. I quote the following passages from his book, *Scepticism and Construction* (George Allen and Unwin Ltd. 1931), in which he is speaking of the experience referred to as an "effortful act of will" or, as he would prefer to call it, "moral effort."

"If we scrutinize that experience with care, we shall see that part and parcel of it is an indefeasible certitude that herein I am creating a definite rupture in the causal continuity of past and present. There is inherent in it, we shall also see, a like indefeasible certitude that I 'need not' be creating this rupture, that I could be acting otherwise, that there were genuinely 'open possibilities' before me at the moment of volition" (131).

(The expression here used by Campbell, "genuinely open possibilities," is, I think, equivalent to Broad's "categorical substitutability.") A few pages later Campbell speaks of certain "affirmations" which seem to be "inherently bound up" with the experience of effortful willing. (Campbell claims that effort in this sense can be distinguished by "careful introspection" (135) both from physical or intellectual effort and from "the energy which belongs to our impulsive nature" (134).)

"First of all, with respect to the source of the effort. The effortful act is felt as issuing from the self, and yet not from the self regarded as just the unity of its existing conative tendencies. And when I say that it is so 'felt,' I mean that this is the ideal interpretation directly and inevitably dictated by the experience when we attend to it with the question as to 'source' in our minds. It is evident enough that the effort is felt as made by the 'self.' The self takes credit for making it, and condemns itself in so far as the effort made is insufficient. But it is equally evident that the effort is felt not to be determined by the self's existent conative dispositions (or, as we may call it, its 'character' as so far formed). For the course which this latter dictates is, *ex hypothesi*, the course in 'the line of least resistance,' the adoption of which is felt to be effortless. The effort is felt, then, as self-determined, and yet as not determined by the self's character as so far formed, not, i.e., causally continuous with he self's *past*" (135).

(Compare with this the similar phrases used by Ross in the passage quoted above from *The Foundations of Ethics*.) In the concluding words of this paragraph Campbell speaks of these "affirmations" as "the immediate report of the experience itself" (135).

We now have before us a number of different, and I think largely independent, formulations by contemporary philosophers of what Sidgwick called "the immediate affirmation of consciousness" which is prompted by the experience of choosing to do what seems "right or reasonable" in spite of contrary inclination. For Ross this affirmation is the claim that we "can at any moment act contrary" to formed character and that, unless we had this power, we should not be entitled to regard ourselves as morally blameworthy for past omissions

so to act. For Broad the judgment implied by the moral "ought" is that the possible actions between which we choose, when one of them presents itself as an obligation, are "categorically substitutable" for each other. Campbell's account of "the immediate report" of experience is that the possibility of overcoming contrary tendencies and "rising to duty," whether or not it is actually realized, is always "genuinely open" to us. Perhaps Broad's "categorical substitutability" is the most satisfactory formulation, just because it is an overtly technical term to which a meaning has been carefully and elaborately assigned. But I hope that the explanations I have given have now entitled me to be more traditional and to speak simply of Free Will. The capital letters indicate that the phrase is being used as a philosopher's technical term to refer to what Professor Campbell calls "the contra-causal sort of freedom" (*Mind* No. 240, October 1951), and that this use must be distinguished from the use of "free will" which denies only, or primarily, external constraint or interference. That we often act of our own "free will" is, as we saw earlier, a platitude. Free Will is not a platitude. It is a doctrine asserted by some philosophers (libertarians) and rejected by others (determinists). But the libertarian, as I have suggested, maintains two distinct theses: the first is that Free Will correctly interprets a natural conviction and that its truth is a condition of moral obligation and moral responsibility; the second is that Free Will is a fact. It is possible to assert the first thesis and deny the second; both Ross and Broad, as we have seen, defend this position; but the position is a paradox. The two theses are connected at least to this extent—that for anyone who maintains the first the burden of disproving the second ought to be felt as a heavy one.

Free Will has often been under heavy fire from philosophers, and has indeed often been left for dead by its opponents. But it is not easy to deal the death-blow; the doctrine has a strong tendency to rise up again; and this is not surprising if the thesis is even plausible that to deny Free Will is to make moral experience at least in part delusive. But in recent philosophical literature, so far as I know, Professor Campbell stands almost alone, not indeed in accepting the doctrine, but in having undertaken its detailed defence. On the other hand, expositions of the topic hostile or indifferent to Free Will are numerous. I have already in this paper indicated some of the lines of thought which such expositions pursue. In what remains I propose to examine some definite difficulties and objections which have been urged against Free Will. I shall consider only a few such difficulties and objections; I hope they are those which have seemed to others to be the most interesting and important. I shall not extend the scope of the discussion by considering non-libertarian accounts of the concept of freedom. To do so would make this paper much too long and

would involve going over again ground covered by Professor Campbell in his article, "Is 'Free Will' a Pseudo-Problem?", in *Mind* of October 1951. I agree in general with Campbell's criticisms, in that article, of the views of the late Professor Schlick in his *Problems of Ethics* (1931), of Mr. Nowell-Smith in his article, "Free Will and Moral Responsibility," in *Mind* of January 1948, and of Mr. C. L. Stevenson in his *Ethics and Language* (1945). It seems to me that Professor Campbell's arguments show also the inadequacy of the lucid analysis of freedom in Professor Ayer's *Philosophical Essays* (1954). (Professor Ayer's essay, "Freedom and Necessity," first appeared in *Polemic*, No. 5, 1946.)

The objections to Free Will which I shall discuss fall under three heads. (1) It is suggested that there is an epistemological or logical difficulty concerning the alleged immediate conviction which is interpreted as involving Free Will. The libertarian claims to know, by reflecting on or introspecting his own experience, that his present effort of will is causally discontinuous with his past. But a proposition of this kind could not be known in this way; it is of the wrong logical type; the fact it states is general not singular. An objection on these lines is urged by Mr. Nowell-Smith in his article, "Determinists and Libertarians," in *Mind* of July 1954 and in his Pelican Book, *Ethics* (1954). (2) It is argued that Free Will misinterprets the so-called immediate experience of freedom since it is not possible to make coherent sense of the suggestion that the activities for which I am responsible are uncaused. The attempt to combine the idea of responsibility with the idea of uncaused effort sets up a vicious infinite regress. This shows that Free Will is not the correct analysis of a universal human conviction but only a muddle. This argument is to be found, I think, in the article by R. E. Hobart, "Free Will as involving Determination and inconceivable without it," in *Mind* of January 1934 and also in the writings, above mentioned, of Mr. Nowell Smith. A similar argument, although not aimed immediately at the same conclusion, is to be found in Professor Broad's article at the point in his discussion where he is maintaining that "categorical substitutability" involves a positive as well as a negative condition. (3) I shall consider finally the contention, not that Free Will incorrectly interprets a belief evoked by experience, but that what it asserts cannot be true. Under his head I shall refer to the objections of Sir David Ross and of Professor Broad to the existence of "the contra-causal sort of freedom."

(1) Mr. Nowell-Smith represents Professor Campbell as holding, or implying, that the occurrence of "a breach in causal continuity" could be established or refuted by introspection (*Mind*, 1954, p. 322). That a given action is uncaused is "a general, negative proposition of vast and sweeping proportions," and "could not be the report of an

introspected *datum*" (323). Now Campbell certainly does not say that a breach of causal continuity could be a datum of introspection; we shall consider whether he implies it. I have noticed only one passage in which Campbell uses the term "introspection," and here what he says is that "careful introspection" shows the necessity of distinguishing effortful willing from physical or intellectual effort and from "the energy which belongs to an impulsive nature" (134, 135): the difference between efforts made under the stress of a powerful motive, competitiveness or fear, and an effort of will is a matter of direct self-knowledge. So it is. Nowell-Smith develops his criticism by saying that Campbell, in answer to the objection that contra-causal freedom is a "mere feeling," replies that this is indeed what it is. But the objection Campbell discusses is not to saying that freedom is a "mere feeling" but to saying that a "mere feeling" is the "basis" of the claim to freedom (137). Campbell, of course, replies that our "immediate experience" of effortful activity is such a basis. The depreciative "mere feeling," as though making an effort were like a twinge of pain or a thrill of pleasure, is the phrase used by the objecter, as Campbell shows by placing it between inverted commas. Nowell-Smith is not correct in asserting that "created a definite rupture in the causal continuity of past and present" is offered by Campbell as a description of a feeling, and that such a rupture is part of "what we see when we scrutinize the experience of making an effort" (323). I have already quoted the passage in *Scepticism* and *Construction* to which Nowell-Smith is referring. What it says is that part of what such scrutiny reveals is the "certitude" that I am "creating a definite rupture in the causal continuity of past and present" (131). The assertion that Campbell speaks of contra-causal freedom as a datum of inspection is made again by Nowell-Smith, with reference to the same passage in *Scepticism and Construction*, in his *Ethics:* "Campbell insists that the question whether choice is 'free' in a contra-causal sense must be settled by introspection" (281). Neither in his article nor in his book does Nowell-Smith quote a complete sentence from the passages with which he finds fault. Actual quotation seems to me to show that his strictures are inapplicable as they stand.

But perhaps Nowell-Smith's objection can be restated. Campbell, as we have seen, says that a "certitude" that I am breaking causal continuity is "part and parcel" of a certain experience. But (*a*) to say that certitude is part of an experience suggests that the certitude is occurrent not dispositional. But it is possible to make a moral effort without saying anything to oneself about causal continuity or categorical substitutability. If to scrutinize is to introspect, scrutiny cannot discover this certitude as "part" of all moral effort. I shall suggest, however, that "scrutiny" does not commit us to all that we

imply by "introspect." (*b*) Granted that what scrutiny discovers is not discontinuity but the belief in discontinuity, we still have to answer the question how a single experience can be the basis for the belief in the truth of the universal negative statement that nothing caused my effortful act.

The challenge to the libertarian is to show how an experience of moral effort, or of moral temptation, can suggest or justify a belief which conflicts with a principle or law of causation. Formulations of such a principle are offered in the discussions of determinism, to which I have already referred, by Sir David Ross and Professor Broad. The less elaborate formulation of Ross is adequate for our present purpose: "for every variation between two events there must be some variation between the antecedent circumstances, without which the variation between events would not have existed" (214). Now Free Will, as applied to a given moral situation, asserts that, all the antecedent circumstances, including all the facts about the agent's occurrent states and dispositions, being what they are, an effort of the required intensity may, or may not, occur. Two questions arise: (i) Does Free Will contradict the "law of causation" as formulated by Ross? (ii) Does moral experience suggest or justify a belief in Free Will? (i) Certainly: that the law is true of moral decisions is just what the libertarian denies. (ii) I have tried to show, earlier in this paper, that an affirmative answer is at least plausible, and I have pointed out that such an answer has been given even by philosophers (Sidgwick, Ross, Broad) who are not prepared to maintain that the doctrine of Free Will is true.

It remains to make more definite what we should understand by Campbell's assertions that the conviction of Free Will is discovered by the scrutiny of experience (131) or is "the immediate report of the experience itself." Neither Free Will nor the conviction of Free Will are objects of "introspection." Campbell does not suggest that they are. What he says, in a passage already quoted, is that Free Will is "the ideal interpretation directly and inevitably dictated by the experience (of effort) when we attended to it with the question as to 'source' in our minds" (135). This makes it clear that the conviction which is said to be "part" of the experience of moral effort is a readiness to answer a question, not an actual answering. It is surely a quite natural and normal use of language to say that such a readiness is discovered by self-scrutiny. If we ask a man what he thinks, not what he is thinking, about something, we expect a conversational response and not a report based on introspection. If the response is an established one, as in an interview given by a celebrity, it may be autobiographical, based on self-scrutiny but not on introspection, and not merely conversational.

(2) When we reach the point of finding Free Will plausible, we are

apt to waver in our attitude to the doctrine: sometimes it looks like an inevitable interpretation of a piece of plain common sense taught us by Nature; sometimes we are persuaded, or almost persuaded, by its opponents that it is a logical absurdity, an irrational search for the self behind the self which, once started, can never end. This second view was expressed, with epigrammatic force and ingenious eloquence, by R. E. Hobart in his article, "Free Will as involving Determination and inconceivable without it," in *Mind* of January 1934. The article plays variations on the theme that, if our actions are *self*-determined, as the libertarian would claim the right to say, then they are self-*determined*—and not undetermined, as the libertarian also wishes to say. Here are two of Hobart's epigrams.

"The principle of free will says: '*I* produce my volitions.' Determinism says: 'My volitions are produced by *me*.' Determinism is free will expressed in the passive voice." (7).

"To cause his original self a man must have existed before his original self. Is there something humiliating to him in the fact that he is not a contradiction in terms?" (21).

Now in this kind of dispute it is sometimes clear that one side or the other is in a muddle but not clear which. I shall not attempt a complete diagnosis and cure of the perplexity induced by remarks like those I have just quoted. I shall make only one suggestion. I think that *critics* of Free Will have sometimes fallen into a confusion between saying that my actions are *mine* and saying that they are *produced* by me, and, as a consequence of this confusion, have thought that Free Will itself is involved in a contradiction (an uncaused decision caused by me) or vicious regress (set up by speaking of an activity of causing myself to be active). I shall begin by quoting some representative statements of the alleged logical difficulty in the doctrine of Free Will.

The first is from Hobart.

"*In proportion* as an act of volition starts of itself without cause it is exactly, so far as the freedom of the individual is concerned, as if it had been thrown into his mind from without—'suggested' to him—by a freakish demon" (7).

Now, if the libertarian retorts that the "act of volition" does not "start of itself" but is determined to start by the individual, then the question "does this determining start of itself?" threatens a vicious infinite regress.

This infinite regress objection is stated by Professor Broad in his discussion of the "negative condition" of categorical substitutability. If the desire to do A just happened (without cause) to be so strong and persistent that I did A and not B, then "the fact that I did A and not B is, in the strictest sense, an *accident*, lucky or unlucky as the case may be" (212). If so, I cannot be praised or blamed for doing A. The

rejoinder to this is that the desire to do A was strong enough "because, and only because, I *reinforced* it by a deliberate effort, which I need not have made . . ." (213). Broad suggests that this reply "merely takes the problem one step further back" (213). The "effort-factor" is *ex hypothesi* not completely determined: it might have reinforced the desire for B or have reinforced the desire for A more or less strongly. "Surely then we can say no more than that it just happened to occur with a certain degree of intensity in favour of the desire for A" (214). Obviously each new application of the first rejoinder leads to a new outbreak of the difficulty.

It is not clear that this alleged regress really does arise, that to bring in the "peculiar factor of deliberate effort or reinforcement" merely takes the problem "one step further back" (213). It is true that, if my action were determined by a state of desire which was itself undetermined, I could not properly be praised or blamed for it. But the reason for this is, not that the desire would be undetermined, but that the desire would be what determined my action. This is shown by the fact that, if the determining desire were itself determined by an antecedent desire, it would still not be proper to praise or blame me. I cannot properly, in the moral sense, be praised or blamed for my states of desiring, occurrent or dispositional, but only for the efforts which I make, or fail to make, to modify those states. What makes it necessary to recognize the "peculiar factor" of effort is that desiring is not something that I do while making an effort is. Of course, if I am to be praised or blamed for making or failing to make efforts, the efforts must be mine. But to say that an effort is mine is not to say that I have made a *prior* effort to produce it any more than to say that a pain is mine is to say that I, or something in me, has produced it. There is no mystery about beginning to make an effort. The idea that there is arises not from reflecting on the suggestion that an effort is uncaused but from failing to attend to the fact that an effort is an occurrence of a different kind from a sensation or a feeling of desire.

Mr. Nowell-Smith also, in his *Ethics*, maintains that the doctrine of Free Will, libertarianism, must be rejected because it gives rise to a vicious infinite regress or vicious infinite regresses. His argument starts by attributing to the libertarian the proposition that efforts, like "aches, pains, qualms and twinges," can be known by introspection. He takes this proposition to imply that an effort is "not something a man *makes*" but "something that *happens* to (or inside) him" (285). This is surely a *non-sequitur:* from the fact, if it is a fact, that an effort resembles a pain in being something one can introspectively "observe," it does not follow that it resembles a pain in any other respect except that of being an event in a personal history. Now (the argument proceeds) the question of a man's responsibility could

not turn on the mere occurrence of a feeling. Hence "trying" must be thought of as "something that a man can choose to do or not to do" (286). According to the libertarian we are entitled to blame a man if, and only if, we can say that he could have tried harder than he did. But his failure to try harder than he in fact tried is either "inexplicable" or else "was due to his not having tried to try as hard as he could have tried to try" (286). Could he have tried harder to try than he in fact tried to try? The next step in the analysis will lead us to say that he did not try hard enough to try to try . . . and so on.

I have not found this argument easy to follow, but I hope that I have given all the essential steps. What seems to be lacking in it is an answer to the question why a man's "failure to try harder" must be "explicable" and to what sort of explanation we are entitled. Why is it not enough to say that the failure is *his* failure? What makes it necessary to move from "try" to "try to try" . . .? I suspect only the idea that trying must, if the libertarian is right, be merely "something that *happens* to (or inside) him." But we have seen that Nowell-Smith is not entitled to use this proposition as a premise in his dialectic.

Nowell-Smith restates his argument in terms of the phrase "making use of will-energy," said to be used by the libertarian as an equivalent of "trying." I shall not discuss this restatement; partly because I do not think that the libertarian needs this phrase, partly because I again fail to see that Nowell-Smith gives any good reason for his contention that the thought of a failure to use sufficient will-energy, i.e. not trying hard enough, forces us to the thought, or attempted thought, of a failure to try hard enough to use it, i.e. a failure to try hard enough to try.

I have now done what I can to show the invalidity of the arguments I have seen for the contention that the doctrine of Free Will is logically absurd and betrays its absurdity by leading us into vicious infinite regresses.

(3) I can now say briefly what I have to say about the reasons given by Sir David Ross and Professor Broad for holding that the doctrine of Free Will must be rejected in spite of the fact that its truth is implied by our moral thinking or by part of our moral thinking.

Ross claims that the "law of causation," his formulation of which I have already quoted, is a proposition the truth of which is known *a priori* independently of the evidence for it (213). It follows from the law that it is "metaphysically impossible" that, being what I am, I might do either of two actions, in spite of the fact that there is in me an impulse to do one of them which is stronger than the impulse to do the other (230). The axiom of causation to which Ross appeals is not logically necessary: it can be denied without self-contradiction. Some philosophers hold that a proposition which is not logically necessary

cannot have self-evidence or *a priori* certainty. Again some scientists think that the principle of indeterminacy in physics conflicts with the alleged law. Ross argues that these scientists are mistaken, and points out that they are contradicted by other scientists who are at least as eminent. I cannot consider these large issues. The only comment I wish to make is this. Even if we hold that there are necessary principles which are not logically necessary, we surely cannot accept any such alleged principle as genuinely necessary if it seems self-evident only so long as we omit to confront it with all the facts which might lead us to doubt it. But Ross himself is convinced that "our ordinary thinking on moral questions," since it, or half of it, "implies a belief in the indetermination of the will," conflicts with the law of causation. It is difficult to see how he can be certain that his law is an *a priori* truth so long as he attends to this part of his own moral theory.

Broad rejects the view that determinism states a necessary truth; "indeterminism is *prima facie* possible" (217). In its application to human conduct indeterminism asserts that at least some voluntary actions

> ". . . have a causal ancestor which contains as a cause-factor the putting-forth of an effort which is not completely determined in direction and intensity by occurrent causation" (217).

This proposition states the negative condition of categorical substitutability; a condition which, as we have seen, Broad holds to be necessary but not sufficient. It is not sufficient because, unless some further condition were fulfilled, the fact that an agent, acting freely, did A and not B would be "in the strictest sense an accident . . ." (212). I have already criticized this argument, and have tried to show that Free Will does not imply that actions or efforts are "accidents" in any damaging sense. If my criticism holds good, Broad's objection to libertarianism does not arise. For what makes libertarianism untenable is, according to Broad, the fact that this further positive condition is "self-evidently impossible" (217). The condition, because it is impossible, cannot be stated clearly. But what, according to Broad, the libertarian wishes to say is that, while the putting forth of a certain effort is *not* completely "determined by occurrent causation," the effort *is* "determined by non-occurrent causation, in which the self or agent, taken as a substance or continuant, is the non-occurrent total cause" (217). To this Broad objects:

> "Now it is surely quite evident that, if the beginning of a certain process at a certain time is determined at all, its total cause *must* contain as an essential factor another event or process which *enters into* the moment from which the determined event or process *issues*" (215).

It seems to me that Broad is right in rejecting the concept of non-occurrent causation. But the important question is whether the libertarian wishes, or ought to wish, to say what Broad puts into his

mouth. Why is it not enough to say that the undetermined effortful activity was my activity? Why should I be driven, by the threat that otherwise my activity "just happened," was "in the strictest sense an accident," to saying that it is also "determined" by me. Certainly, if it is determined, the determination must be non-occurrent. For, if the determining of my activity were an occurrence distinct from the activity, the negative condition, that my activity should not be occurrently determined, would not be satisfied and we should, moreover, be involved in a vicious infinite regress. But the idea that the negative condition is not enough for responsibility becomes plausible, I suggest, only if we slip into thinking of the activity I perform as like a sensation of pleasure or pain which I feel. I am not responsible for my pain. But this is not because it "just happens" but because it is a feeling and not an activity. We have taken care of the difference between the feeling which happens to me and the activity which I perform when we have said that the one is a feeling and the other an activity. We need not, and therefore must not, take care of it again by saying that, while we do nothing about our pains, we non-occurrently determine our activities. I think that, when we attend to, or reconstruct in imagination, the making of an effort, we *are* inclined to say that the activity is occurrently undetermined and are *not* moved to add that it is non-occurrently determined.

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KNOWING INVOLVES DECIDING

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THE general view which I am going to put forward in this paper is that knowing, if it is knowing *that*, involves deciding, or accepting a decision, that something is, was or will be the case. I shall also try to show that, just because the logic of the word "know" has been insufficiently investigated, various unnecessary puzzles have been generated—puzzles which may be eliminated by a more thoroughgoing analysis of "know"-statements.

I

When we set out to examine the logical behaviour of "know," we find that two interrelated questions are involved: (i) How does "know" function in discourse? (ii) When are we justified in using the word? To ask these two questions about a word such as "eat" would be a waste of time, since the answers are tolerably clear; but the history of philosophy, and more particularly current philosophical discussions, have shown that it is far from a waste of time to ask these questions about "know."

1. Although problems can arise from various uses of "know," I shall confine my attention to what seems to me the most important use, namely, knowing *that*; and I propose to consider, as a start, the following three examples:

(*a*) I know that my daughter will marry you
(*b*) I know that Gandhi is dead
(*c*) I know that gold will dissolve in aqua regia

In what sort of circumstances do statements such as these come to be made? Let us look at each in turn.

(a) *I know that my daughter will marry you*

Imagine the following situation. I am courting Angela, the daughter of Mrs. Smith. I am uncertain about my prospects, and too nervous to put a direct question as yet to Angela herself, so I say to Mrs. Smith: "Do you think Angela will marry me?"—to which Mrs. Smith replies: "I know she will." I am still not altogether convinced and riposte: "But how do you know? Did Angela say she would?" "No," replies Mrs. Smith, "but all the same I know she will." Now suppose that Mrs. Smith considers she has good reasons for using the expression "I know" rather than "I believe." She may for instance have noticed her daughter ceasing to pay attention to other suitors, she may have seen her studying leaflets about cruises

to the Balearic Isles, which I had declared to be an ideal place for a honeymoon, she may have been consulted about wedding clothes and whether a certain salary, the same as my own, would suffice to keep two people in reasonable comfort—and so on. Suppose further that when I at last come to the point and ask Angela the vital question, she says Yes.

Now, according to my analysis what Mrs. Smith has done is this. She has decided, on the basis of evidence which seemed to her both reliable and sufficient, that her daughter will marry me and she has expressed this decision by saying "I *know* she will." This is not a complete analysis of Mrs. Smith's "know"-statement; for it would be clearly unsatisfactory to *translate* that statement into "I have decided that my daughter will marry you." One reason, though not the only reason, for this is that the translation tends to be ambiguous; it *might* convey the impression that Mrs. Smith, in saying she had decided that her daughter would marry me, was hinting that she was going to *order* her daughter to marry me, or would *ensure that* her daughter married me. This ambiguity follows from the operational versatility of the verb "decide" itself; for its most usual role is to convey that we have decided *to* do or bring about something—and frequently the use of deciding *that* can clearly imply this role, e.g. I decided that the gardener must be dismissed. Nevertheless, we are all agreed that people can decide *that* so-and-so is the case without intending to do or bring about anything at all, and it is only this sense of "decide" which I am here invoking. The decision-analysis, then, is offered merely as the essential *basis* of Mrs. Smith's "know"-statement—or, as will appear shortly, of any other "knowing *that*"-statement—and that is why I restricted myself, at the outset, to the claim that knowing, if it is knowing *that*, *involves* deciding. Having said this, I shall from now on assume that my use of the term "analysis," where it refers to what I have called the decision-analysis, will be interpreted in this way.

Another question now arises, which does not stem from my particular analysis, namely, Was Mrs. Smith justified, or not, in using the expression "I know"? Ought she to have said merely "I believe" or "I am certain"? The immediate point to be noted is that this question cannot be settled by any appeal to that nebulous authority called Common Sense. If we did make such an appeal, we should receive conflicting answers: some people would admit, and other deny, that Common Sense sanctions the use of "know" in circumstances such as these; and equally some would pay regard to, and others deny the relevance of, what *might* have happened in the end, i.e. Angela saying No. To obtain an unambiguous answer, then, it would seem that we must appeal to some special theory of knowing; and this is the course I shall in fact adopt a little later on. For the

moment, however, I am more concerned with analysis, so let us pass on to our second example.

(b) *I know that Gandhi is dead*

What do I imply by saying "I know that Gandhi is dead"? There is of course no "one and one only" answer to this question, because the speaker may have uttered this "know"-statement either on the basis of personal experience or on the basis of what he had read or been told. But in my own case when I say "I know that Gandhi is dead" I imply that I have accepted the concordant decisions of eye-witnesses and newspapers to the effect that Gandhi was murdered by an assassin and is therefore dead. These decisions were based on evidence, direct and indirect, which was regarded as both reliable and sufficient by those who made them; and it was these decisions which, when widely publicized, enabled both myself and others to say without hesitation "I know that Gandhi is dead." When we inspect this situation closely we see that there was in fact a whole chain of decisions involved, some actually forming and all capable of forming the basis of correlative "know"-statements. Let us assume that Abdul the reporter was on the spot near where Gandhi was standing. He saw the pistol raised, heard the shots and watched Gandhi fall; later he questioned the doctor who was summoned to the scene and who pronounced Gandhi to be dead, having so decided on the basis of his medical experience. He, the doctor, may have expressed this decision to Abdul by saying: "It's no use hoping for a miracle; I know he is dead." Abdul accepted this decision of the doctor, and would have expressed his acceptance of it, if questioned by a suspicious bystander, by echoing the doctor's "I know he is dead." Abdul then went to a telephone booth and rang up the *Times of India* office; he recited his evidence to the sub-editor who decided to accept Abdul's report as true. The report was duly printed, under the headline "Gandhi Assassinated." A shopkeeper in Delhi read the printed report, was asked by an already disquieted customer "Is Gandhi really dead?" and replied "I know he is; I have just read it in the *Times of India*." The shopkeeper had thus decided to accept the newspaper's report and expressed this decision by saying "I know, etc." When the news was cabled to England, I read it in *The Times*. *The Times*, let us assume, made it clear that it regarded the report as true; it had decided to accept it without reservation. I am in the habit of accepting reports of *The Times* on matters of fact, and here was a case where *The Times* was in effect saying "We know that Gandhi has been murdered and is therefore dead"; so, after carefully reading all the evidence, I myself decided that Gandhi was dead and from then on, in response to any queries on this matter, I should have replied "I know that Gandhi is dead."

When we come to the question of justifying my "know"-statement here, some philosophers would say "Although I do not necessarily accept your analysis, your 'know'-statement here was justified—which Mrs. Smith's 'know'-statement was not—because you could prove, i.e. adduce *conclusive* evidence that, Gandhi was in fact murdered"; whereas other philosophers would say "I agree that your 'know'-statement was justified here, but I don't admit that you can never use 'know' properly unless you can state conclusive evidence." The first alternative represents what would be Professor Woozley's view; the second what would be Professor Moore's—and in due course we shall have to examine both these views about the role played by "conclusive" evidence in the justification of "know"-statements. Meanwhile let us pass on to our third example.

(c) *I know that gold will dissolve in aqua regia*

As before, this statement involves a decision which might be conveyed by the sentence "I have decided to accept the teaching of reputable chemistry textbooks to the effect that gold will always dissolve in aqua regia." Behind this decision of mine there lies, once again, a chain or series of previous decisions. To put the matter somewhat elliptically, chemists A, B and C who experimented with acids and metals brought into contact with each other unanimously decided that gold dissolved in aqua regia and expressed this collective decision by saying "We know that gold dissolves (= always has dissolved and always will dissolve) in aqua regia." This decision was then accepted by the writers of chemistry textbooks, who duly enshrined it by writing "gold will dissolve in aqua regia" thereby implying that they *know* it will. I then read a chemistry textbook, or talk to a qualified chemist, and learn from either of these sources that gold will always dissolve in aqua regia. Having little acquaintance with chemistry myself, but being at the same time respectful of the authoritative and unanimous pronouncements of reputable chemists, I decide to accept the official teaching, which is merely the official decision, with regard to the behaviour of gold in aqua regia and to express this by saying "I know that gold will dissolve in aqua regia."

Now, when it comes to the question whether I was justified in my use of "know" here, we may note that whereas the layman would have little hesitation in allowing that my statement was legitimate, most philosophers would be prone to veto it on the ground that I am using "know" about the future. They would not consider it relevant that my decision was based on the unanimous decisions of reputable chemists that gold always has behaved and always will behave in a perfectly stable manner when immersed in aqua regia, whereas Mrs. Smith's decision was based on her calculations about

the behaviour of human beings which is generally agreed to be relatively unstable. In their view, both statements, since they equally refer to future events, are on a par. But this equation obviously calls for investigation since it is by no means clear that it is in fact logical to treat the two statements alike. This however must be undertaken when we go into this whole question of justifying or vetoing "know"-statements. For the present, I am more concerned to develop and strengthen my arguments for the thesis I have been maintaining, namely, that when you say you know that S is, was or will be P, you are in effect announcing that you have made or accepted some decision. Let us therefore turn our attention to the orthodox dispositional analysis of knowing *that*, where "know" is translated into "able to state correctly." Now it is essential for me to examine the status of "correctly" here, for my claim that all "know"-statements involve a decision, or the acceptance of a decision, is closely bound up with the logical behaviour of this adverb.

2. To start off in a dogmatic vein, I will say that the force of "correctly" in the dispositional analysis of "know"-statements, and I think in any context, is "in accordance with some decision," and usually "in accordance with a dominant decision." I shall consider later the obvious query "But surely a dominant decision can sometimes be incorrect?" and likewise its counterpart "Does a new dominant decision on a specific topic render the former dominant decision incorrect?" At present, I want to examine how far my analysis of "correctly" ties up with my analysis of "I know that Gandhi is dead" and "I know that gold will dissolve in aqua regia." I analysed the first of these, it will be remembered, as "I have decided to accept the concordant decisions of eyewitnesses, as reported in the newspapers, that Gandhi is dead and I express this acceptance by saying 'I know that Gandhi is dead'." Suppose now I give the usual dispositional analysis of this statement; it will then run "I am able to state correctly that Gandhi is dead"—and this analysis gives no *prima facie* indication that any element of decision is involved. But the decision-element becomes immediately obvious if we apply the logical probe to "correctly" and analyse it as "in accordance with a dominant decision." But do we have to analyse "correctly" in this way? Could we not just say that "correctly" means "in accordance with the facts" or "in accordance with what is the case or the truth"? There are long and short answers to this query, and the long answers commit one to discuss conflicting theories of truth, whether empirical propositions "picture" or "correspond to" reality and what not. I do not propose to embark on any such discussion; nor is it necessary for me to do so since a relatively short answer will solve our particular problem. Suppose

some one says to me "The earth is round and not flat" and I say "Are you stating a fact or a hypothesis?" The reply will be "I am stating a fact," by which is meant "I am *asserting that* so and so is the case." But this "fact," like a host of other empirical "facts," can only be plausibly stated to be such just because various people, considered qualified to decide, have actually decided that the earth is indeed round and not flat. Suppose again that some one says to me "I can translate the *Dunciad* into idiomatic Greek" and I say "Are you stating a fact?" To establish whether this person *is* stating a fact a decision has got to be made, either by myself or (better) by some more competent Greek scholar. Suppose finally that some one says to me "I have a pain in my knee-cap" and that, facetiously perhaps, I say "Are you stating a fact?" The expected reply—"Of course I am"—can only be made because, owing to certain neural reactions, the person concerned has decided that he *has* a pain in his knee-cap. So what I am claiming is that all "correct" empirical statements and sense-statements[1]—i.e. those which are "in accordance with the facts"—are statements based on some decision, either personal or what I have called dominant. Notice by the way that, except in the case of sense-statements, the proper use of "correctly" —and by "proper" I simply mean what people in general will regard as such—is always dependent, directly or indirectly, on a *dominant* decision in the end. Thus, if I decide, contrary to the dominant decision of qualified tropical zoologists, that Malayan cobras are sometimes non-poisonous and claim that I am correctly stating a fact about Malayan cobras, I can only expect the world at large to admit that I am stating correctly if and when the qualified zoologists come round to my view and thus alter their previous decision.

But what about the familiar expression "He was right all the time, and the majority was wrong"? The answer is that the phrase "He was right all the time," if it is to be substantiated, *indirectly* implies a dominant decision. For by saying "He was right" you automatically imply that all intelligent and rational people will now decide as he decided, and would have so decided in the first place if they had been in his circumstances. A similar point would arise if, say, I journeyed to Tibet and found Gandhi alive in a remote monastery; for this would impel me to exclaim "So the official account (decision) was incorrect after all!" But the claim I would now make to be able to state correctly that Gandhi is alive implies that, if others could see what I saw, and spread the news, the dominant decision would be the same as my own personal decision. The point we have to grasp—

[1] I use the expression "sense-statement" to cover statements of the type "I am seeing (or sensing) a blue patch" or "I have (or feel) a pain." This convention was, I believe, initiated by Professor Malcolm and is frequently adopted in philosophical discussions.

and our normal linguistic habits make it difficult for us to do so—is that we have no way of "getting at" the facts except by deciding that they are so and so on the basis of certain evidence. There is no mysterious direct access to them which enables a person who is fortunate or clever enough to hit on it to issue a series of absolutely and finally "correct" factual statements. Thus, we can now see the answer to the query I stated earlier and put in the form "But surely a dominant decision can sometimes be incorrect?", and likewise the answer to its counterpart "Does a new dominant decision on a specific topic render the former dominant decision incorrect?" Briefly, a dominant decision, as we have just shown, can always be disputed; and if it can be successfully disputed—if, that is, it can be made to appear to intelligent and rational people as no longer appropriate to the evidence—then it will be generally abandoned. When therefore we say that a dominant decision has been found to be "incorrect," we imply, by our use of the word "incorrect," that the original decision has been superseded because it is no longer in harmony with what is or will be the new dominant decision.

To sum up: all "correct" empirical statements, like the dominant decisions on which they are based, are at least capable of being revised; and the difficulty we sometimes experience in saying with assurance that *this* is the correct account about so and so may well depend on our being unable to find a decision which we can really regard as dominant.

3. There is another feature about knowing which we must now notice, to which Professor Austin has called attention; and it is not unimportant since the dispositional analysis of "know" tends to mask it completely. Locke, we may remember, claimed, in his *Second Letter to the Bishop of Worcester*, that "I know" merely equals "I am certain." Austin, rightly enough, rejects this view. After reminding us that in ordinary conversation we never seem to ask "*Why* do you know?" or "*How* do you believe?" but always "*How* do you know?" or "*Why* do you believe?" he goes on as follows:

> The "existence" of your alleged belief is not challenged, but the "existence" of your alleged knowledge *is* challenged. If we like to say that "I believe," and likewise "I am sure," and "I am certain," are descriptions of subjective mental or cognitive states or attitudes, or what not, then "I know" is not that, or at least not merely that: it functions differently in talking. (*Logic and Language*, Second Series, p. 125.)

Knowing then, according to Austin, is not equivalent, in talking, to being certain. What is it, therefore, that differentiates "I know," not only from "I am certain," but also from all other "psychologically descriptive" phrases on the certainty scale? Is it, for instance, that "I know that S is P" *entails* both "I am certain that S is P" and "S

is in fact P"? This would square with the formula "If you know, you can't be wrong." But Austin does not adopt this solution—although he does not deny that the formula makes sense—and his actual answer is as follows:

> Saying "I know" is taking a new plunge. But it is *not* saying "I have performed a specially striking feat of cognition, superior, in the same scale as believing and being sure, even to being merely quite sure": for there *is* nothing in that scale superior to being quite sure. . . . When I say "I know" I *give others my word*: I *give others my authority for saying* that "S is P." (Ibid., p. 144).

On Austin's view, then, it is the authority-pledging character of "know"-statements which differentiates them from statements expressing belief or certainty. I accept this interpretation; and I believe it to be perfectly compatible with my decision-analysis of both "know" and its dispositional counterpart "able to state correctly"—which it supplements. I am not so happy, however, about Austin's approach to the justification of "know"-statements, as will be made clear in the next section.

II

We are now in a position to attack the problem of justifying and vetoing "know"-statements; and although my decision-analysis of knowing has already given us some fairly obvious clues here, it is first necessary to see why it is that some current philosophical theories on this issue are unsatisfactory.

1. Let us suppose that both Mrs. Smith and the chemist who told me he knew that gold would dissolve in aqua regia come to me with worried looks on their faces and say, in unison, "We understand that according to certain philosophers' rules we were not entitled to use 'know' as we did. Could you therefore please direct us to some philosopher who will tell us, in simple language, what the rules are and why we were transgressing them?" I will suppose that I first direct these people to Professor Austin and I will try to state, as fairly as I can, what the result would be.

(*a*) Let us start with Mrs. Smith. Now it is perfectly clear that Mrs. Smith intended to "give me her word," to "give me her authority," that Angela would marry me; and that is why, Austin would tell us, she took a "new plunge" and used "know" rather than "believe" or "am sure." I have already admitted that I think this to be a correct interpretation of what Mrs. Smith was actually doing, although, in my view, it requires to be supplemented by a reference to the fact that Mrs. Smith was, by saying "I know," also expressing a decision. But was she justified in doing what she did?—for we

should not, Austin emphasizes, give our authority idly. Moreover, Mrs. Smith used "I know" in respect of the *future*, and "know"-statements about the future raise some familiar philosophical difficulties. Now Austin, when he has passed, almost imperceptibly, from interpreting to rule-making, does deal with statements about the future and we must try to discover whether Mrs. Smith was entitled to use "I know" here or not—on the basis of his rules. This is what he says:

> If you say you *know* something, the most immediate challenge takes the form of asking "Are you in a position to know?": that is, you must undertake to show, not merely that you are sure of it, but that it is within your cognizance. There is a similar form of challenge in the case of promising: fully intending is not enough—you must also undertake to show that "you are in a position to promise," that is, that it is within your power. Over these two points in the two cases parallel series of doubts are apt to infect philosophers, on the ground that I cannot foresee the future. Some begin to hold that I should never, or practically never, say I know anything—perhaps only what I am sensing at this moment: others that I should never, or practically never, say I promise —perhaps only what is actually within my power at this moment. In both cases there is an obsession: if I know *I can't be wrong*, so I can't have the right to say I know, and if I promise *I can't fail*, so I can't have the right to say I promise. And in both cases this obsession fastens on my inability to make *predictions* as the root of the matter, meaning by predictions claims to know the future. But this is doubly mistaken in both cases. . . . We may be perfectly justified in saying we know or we promise, in spite of the fact that things "may" turn out badly, and it's a more or less serious matter for us if they do. And further, it is overlooked that the conditions which must be satisfied if I am to show that a thing is within my cognizance or within my power are conditions, not about the future, but about *the present and the past:* it is not demanded that I do more than *believe* about the future. (Op. cit., pp. 144–5.)

This looks like a straightforward argument, but its application to Mrs. Smith's statement, "I know that Angela will marry you," is by no means clear. In the first place Austin asserts that the reply to the challenge "Are you in a position to know?" involves showing that whatever you claim to know is "within your cognizance." A quick glance at the etymology of "cognizance," however, indicates that this phrase does not take us very far; and all Austin seems to be saying is that when I claim to know p, I must be able to show that p is something I *could* know. But this defect can easily be remedied. If, for instance, I say that I know there are mountains on the other side of the moon, it might be retorted that I cannot know this since such a thing is not "within my cogizance"; and this phrase could then be taken to mean that I am not in a position to *assemble evidence*, by looking or otherwise, for my assertion. I am only therefore entitled to use the word "know" if I *am* in a position to assemble, or have access to, evidence directly relevant to what I claim to know. Now, is Mrs. Smith's assertion that her daughter will marry me the sort of assertion for which she can assemble evidence? Clearly it is,

although the weight or conclusiveness of the evidence may be disputed; but some theorists would immediately put Mrs. Smith out of court because, in their view, no evidence whatever legitimizes "know"-statements about the future: to keep within the rules she should have restricted herself to saying "I believe." But does Austin subscribe to these rules? It is here that his remarks seem to me ambiguous. On one reading of the passage quoted Mrs. Smith seems entitled to use "know" even though it refers to the future: "We may be perfectly justified in saying we know . . . in spite of the fact that things 'may' turn out badly, and it's a more or less serious matter for us if they do." Moreover, we might well feel that the correctness of this interpretation is reinforced by Austin's coupling knowing with promising, as regards their function in talking, since "I promise" normally refers to a future action. Yet this reading may well be mistaken; for the sentence just quoted, so far as I can judge, seems intended to apply to statements of the form "I know that S *is* (or *was*) P," and the remark that things "may" turn out badly would then refer to the possibility of some *process of verification* showing us to have been mistaken in an assertion about the present or the past. For example, I might say, at lunch-time on Wednesday, "I know that there is an island called Stromboli lying off the coast of Sicily." Suppose, however, that an earthquake and tidal wave had occurred early on Wednesday morning and that by lunch-time Stromboli had sunk beneath the waves. In this case things would have turned out badly for me, since I was in fact saying I knew what I did not know. If this reading is correct then Austin's remark that things "may" turn out badly refers to the process of verifying some "know"-statement about the present or the past, and that process showing the "know"-statement to have been false; but it does not refer to the non-occurrence of some predicted event, such as Angela not agreeing to marry me when her mother had said she would. I shall assume that the second reading is more in conformity with Austin's intentions; in which case it is not clear whether Mrs. Smith was justified or not, even though things turned out well for her, in saying "I know." Notice, however, that Austin also says "it is not *demanded* that I do more than *believe* about the future." But who, we may ask, is the unspecified somebody who is so thoughtful as not to make this demand on me? The answer, I suppose, is that this is Austin's way of analysing what I am "really" doing when I am claiming to know the future; it is not a piece of rule-making at all. Austin's footnote to the passage in question appears to bear out this interpretation:

> If "Figs never grow on thistles" is taken to mean "None ever have and none ever will," then it is implied that I *know* that none ever have, but only that I *believe* that none ever will.

I presume, therefore, that if I elected to say "I know that figs never grow on thistles," rather than just "Figs never grow on thistles," Austin would not object to my using the word "know" here, although it would of course call for the special analysis specified in his footnote. But I doubt whether Mrs. Smith would agree that she was merely believing when she made her original assertion; at the time, she said that she knew, and she meant that she knew. In other words, whatever is the alleged implication of her statement, she was talking, rightly or wrongly, in quite a different frame of mind from the one she would talk in if she were merely expressing belief. She was, if you like, talking in an authority-pledging frame of mind, which for Austin is a "know" frame of mind.

The paradox involved in analysing a "know" frame of mind with a future reference into a "believe" frame of mind—a paradox which is heightened by Austin's "new plunge" view of knowing—is brought out even more clearly when we turn to the chemist. Suppose that when he tells me that if I drop a gold ring into aqua regia, it will dissolve, I say "Are you sure it will?" "I am not only sure," the chemist replies, "I *know* it will." Let us therefore re-phrase the chemist's statement to make it exactly parallel to Austin's example about figs and thistles. It will now run: aqua regia always dissolves gold; and the Austinian analysis will be: I know that aqua regia has always dissolved gold, and I believe it always will. Nevertheless, this is neither what our chemist wants to say nor what he thinks he is saying. He might be prepared to say that he merely *believes* that a hydrogen bomb with a thousand times the explosive power of the last one detonated could be constructed; but he has definitely decided, and would pledge his professional reputation, that gold will always and inevitably dissolve in aqua regia, and he expresses this by using the phrase "I know." Rightly or wrongly, he is not here talking in a "believe" frame of mind. Nor would he be satisfied with Austin's remark that "it is not demanded" that he do more than believe about the future; for this does not make it clear that he has broken any specific rule by saying he *knows*. Of course, Austin might claim that he does not wish to persuade either the chemist or Mrs. Smith or anyone else to change his or her usual terminology: he is only, like Wittgenstein, concerned with analysis. But I think he has complicated his position by not distinguishing carefully enough between analysing and rule-making. Not that it is always easy to keep these two matters apart when discussing problems about knowing, because rules for the proper use of "know" depend on the way "know" functions in talking, just as rules for the proper use of "gold" and "aqua regia" depend on the way these two words function in talking. But since, unfortunately, the analysis of how "know" functions is more complicated, and more contentious, than

that of how "gold" and "aqua regia" function, it is best, initially at least, to keep the two questions apart.

(*b*) Let us now therefore direct our two worried people to Professor Woozley; for Woozley does make rules for the correct use of "know" in a book specifically designed to introduce beginners in philosophy to the theory of knowledge.

The answer that he would give is set forth under his heading "Conditions of Knowledge," as follows:

> To know then, a man must
> (*a*) have evidence;
> (*b*) be right about the evidence; and
> (*c*) be right about the relation of the evidence to the conclusion. He must also be sure that he is right under (*b*) and (*c*). (*Theory of Knowledge: An Introduction*, p. 191.)

Now both Mrs. Smith and the chemist appear to have satisfied all three of Woozley's conditions for knowing; for (*a*) they both had evidence, (*b*) they were both right about the evidence and (*c*) they were both right about the relation of the evidence to the conclusion, namely, (i) that Angela would agree to marry me and (ii) that gold would dissolve in aqua regia. They were also both sure that they were right under (*b*) and (*c*). Why is it then that Woozley would not and could not agree that Mrs. Smith, and equally the chemist, were justified in using the expression "I know"? The answer to this is contained in the sentences which immediately follow those quoted above:

> It is not necessary to knowing *p* that the man should go through a long and explicit process of self-questioning under (*b*) and (*c*). A man's claim to know that Gandhi is dead is legitimate if he *can* now prove it; it is not necessary that he should just *have* proved it.

This paragraph is reinforced on the following page by the claim that knowing is the case of "being sure and being right, on evidence which is conclusive." Now it is precisely the introduction, or the making explicit, of this additional rule—namely, ability to *prove* before one is entitled to say "I know"—which gives rise to such serious complications in any theory of knowing. An individual could satisfy conditions (*a*), (*b*) and (*c*) and still not be able to prove, to the satisfaction of a pertinacious critic, that what he said he knew was in fact the case. Thus, whatever concessions Mrs. Smith might receive from Austin—and I do not think she really would receive any—she stands condemned by Woozley; for she used "know" about the future and who will admit that you can assemble "conclusive" evidence for the occurrence of some future event? Yet, when I notify Mrs. Smith of Angela's acceptance of me, she might well turn to me and say :"There! I said I knew she would say

Yes, and she did!" And if I replied: "Yes, I realized you felt pretty sure about the outcome," she might then retort: "Sure about it my foot! I *knew*." Again, however firmly the chemist may insist that "gold *will* dissolve in aqua regia," he is not entitled to say he is stating what he knows will happen, according to Woozley's rule. Indeed, none of the predictive formulae used by scientists can ever be regarded as "knowledge." Yet, suppose I requested the chemist to put his claim to the test and then said to him: "Ah, I realize now why you made your prediction with such confidence," he would be likely to reply: "It wasn't just a question of confidence; I *knew* the gold would dissolve." Hence, although both Mrs. Smith and the chemist, reviewing the situation retrospectively, might firmly maintain that they knew the outcome—they were respectively both sure and right—Woozley is bound to deny that either of them in fact did know the outcome. Note, too, that Woozley's rule puts Mrs. Smith and the chemist on the same footing, despite the very different "material" about which they were respectively predicting. To this, however, Woozley might reply that both examples involved predictions; that, however much scientists may protest, a philosopher can never agree that "know" may be legitimately used about the future; and that if this involves a wholesale correction of popular practice, what of it? I will not debate this at the moment; for I am more concerned to show that if ability to prove is a necessary condition to knowing, then the word "know" can never, without some hamstringing qualification, even be used about the *present or the past*. Consider, for instance, Woozley's own example about knowing that Gandhi is dead. Suppose now I claim to know that Gandhi is dead, not from the newspaper or wireless reports, but from first-hand evidence—suppose, that is, I was on the spot when the alleged assassination took place, and I actually heard the pistol shots and saw Gandhi fall. A few hours later, having returned to my hotel in Delhi, I meet some one who says to me: "I heard a wireless report that Gandhi has been assassinated—do you think he is really dead?" —to which I reply: "I know he is dead; I saw him die with my own eyes." My questioner, however, is a sceptical person and politely insinuates that the evidence of my eyes is not necessarily conclusive. "You," he might say, "together with the newspaper reporters, and *a fortiori* the radio commentators, may have been deceived; for all you know, it was not really Gandhi, but some one impersonating him, who was assassinated; or perhaps it was a pseudo-assassination, staged for some obscure political purpose, and Gandhi, after pretending to fall down dead, was later spirited away to some mountain retreat; or perhaps the doctors were mistaken, and Gandhi is still alive but in a coma from which he may possibly emerge eventually; or perhaps . . . ." My sceptical questioner could obviously extend

his list of *physical* possibilities, and however convinced I was myself that Gandhi was dead, I should have in the end to admit that I could not produce evidence which would necessarily be regarded as conclusive by someone else. All the more perplexing, therefore, is the following comment made by Woozley in this context:

> Although there is a logical possibility of an empirical proposition being false—that there is such a possibility is part of what is meant by calling it an *empirical* proposition—there is another sense of possible, in which it is not possible for some empirical propositions to be false. In this sense there is no possibility that Gandhi was not murdered, that I am not now in Oxford, that the sun will rise in the west to-morrow. (Op. cit., p. 183.)

The short answer to this is that, while it is certainly not likely, it is nevertheless both logically *and* physically possible that Gandhi was not murdered. In other words, Woozley appears to be confusing possibility with probability. At this point, however, some one might say "Forget about Gandhi and substitute Julius Caesar; surely we know, we KNOW, that Caesar is dead!" Yes, we do know this, in Woozley's sense of "know," *provided* we can prove that the Roman general and dictator called Julius Caesar actually existed—and this illustrates what I meant by saying that, if ability to prove is a necessary condition to knowing, we cannot legitimately use "know" without some qualification. But we all *know* that Julius Caesar existed! Yes, we do—*if* the historical and other records are true; but it is at least conceivable that they might be false.

The view here implied—that empirical statements are not conclusively verifiable—is neither startling nor new; it has been stressed by a number of modern philosophers, including Lord Russell and Professor Ayer, and in my opinion can only be assailed by playing fast and loose with the word "conclusive." On the other hand, it must be admitted that this view has also been opposed—in some cases by philosophers (Ayer for example) who originally supported it. I am not, however, going to debate this issue of conclusive evidence any further; for I intend to show that we can detach it from its connection with "know"-statements and thus prevent the controversy over verifiability from interfering with our use of the word "know." In other words, I shall now show that we can dispense with the conception of conclusive evidence and still say, with adequate justification, "I know that Gandhi is dead" or "I know that Julius Caesar crossed the Rubicon in 49 B.C."; and that we can also justifiably say "I know that gold will dissolve in aqua regia" though not "I know that my daughter will marry you." But to see how this comes about we must return to our decision-analysis.

2. The decision-analysis of knowing has already indicated, implicitly, that no foolproof rules can be issued for the proper

use of "know" in empirical discourse; and we may now state explicitly that you can justifiably say "I know" if the decision on which this assertion is based was well grounded. "Well grounded," however, is obviously susceptible of elastic interpretation; but broadly speaking it means here that, on technical matters, you have decided in accordance with the dominant decision of the experts, and that, on non-technical matters, you have decided in accordance with what is, or would be, the dominant decision of normal and intelligent people. Where you have decided contrary to a dominant decision, your decision is well grounded if you can show that it would become a dominant decision if there were general access to the evidence which, for the moment, you alone may possess. Moreover, although in any case your decision could not have been *so* well grounded as to preclude subsequent revision, many "know"-statements are sufficiently well grounded to make revision a somewhat remote possibility. We should be very surprised to learn, for instance that all the leading historians had unanimously decided that Julius Caesar never existed. There are, however, many shadowy areas of discourse where emotions are deeply involved and where decisions clash strongly—and here we find it difficult to talk of dominant decisions at all. But very often this is just the place where the modern philosopher can be of help in sorting out the issues involved. For example, it was once widely held by intelligent people, including many philosophers, that it could be conclusively proved that God exists; later, however, and especially after Kant had come on the scene, a certain amount of scepticism developed with regard to the possibility of performing this feat, and many began to recommend that we should say "we believe" rather than "we know" that God exists. But today the question "Does God exist?" invites, from a philosopher, neither a "know" nor a "believe" statement, positive or negative; it invites an analysis of the terms "God" and "exists."

We come now to the awkward question whether, or in what circumstances, we may justifiably use "know" about the future; and we may recall the difficulty we experienced in getting any clear guidance on this point from Austin, and the fact that Woozley's rules for the proper use of "know" made all "know"-statements with a future reference illicit. Let us therefore return for a moment to the two examples designed to illustrate this problem, those involving Mrs. Smith and the chemist respectively. Now our analysis of knowing *that* enables us to see that the only proper ground on which a philosopher could have objected to Mrs. Smith's using "I know," about her daughter's future actions, is that it has been generally decided that the behaviour of human beings, like that of race-horses, is relatively unstable—or at least not sufficiently stable to warrant firm predictions. So, strictly speaking, she should not have

said "I know"; she should have used some expression on the certainty scale. Moreover, even the fact that she was "right" after all does not alter the situation. For when she said "I know" she implied, as our analysis of "correctly" showed, that her predictive assertion would be or ought to be a dominant decision, whereas our general appraisal of human behaviour, and particularly female human behaviour, makes it at once clear that it would not have been a dominant decision. But this stricture does not apply to the chemist and his predictive assertion "I know that gold will dissolve in aqua regia." The dominant scientific decision, which is here embodied in the chemist's "know"-statement, is a decision, never disputed so far, that this metal gold, and this acid aqua regia, have behaved and always will behave in a certain stable manner when brought into contact with each other under controlled conditions; hence the chemist's statement, though also referring to the future, is immeasurably better grounded than Mrs. Smith's, for it is fully in accordance with a dominant decision; and it can only be rendered suspect by appealing to some philosophical theory, such as Hume's, which declares that we have *no* rational grounds for deciding that the future will resemble the past. But there is no compulsion on a scientist to accept such a theory, or to pass, at the bidding of some philosopher, from a "know" frame of mind back into a "believe" frame of mind. In either ordinary or scientific discourse, then, the proper use of "know" in respect of the future depends, not on some philosophical rule, but on the nature of the case and the kind of "material" about which prediction is being made. But there is no magic criterion to establish legitimacy or illegitimacy in prediction; past experience, intelligently interpreted, furnishes the grounds for regarding some decisions as well founded, e.g. I know that gold will dissolve in aqua regia, and other decisions, even if things turn out favourably, as ill founded, e.g. I know that Xenophon will win the 3.30.

3. It is time now to cast a glance at a familiar epistemological dispute which has largely turned on the correct application of the word "know." I refer to the arguments that have gone on about Moore's claim, in his British Academy Lecture, to know certain things without being able to state conclusive evidence for them. The passage which has been the cause of so much worry is the one that occurs towards the end of his lecture, after he has given us his two proofs for the existence of external objects in the present and the past respectively. Here it is:

> How am I to prove that "Here's one hand, and here's another"? I do not believe I can do it. In order to do it, I should need to prove for one thing, as Descartes pointed out, that I am not now dreaming. But how can I prove

that I am not? I have, no doubt, conclusive reasons for asserting that I am not now dreaming; I have conclusive evidence that I am awake: but that is a very different thing from being able to prove it. I could not tell you what all my evidence is; and I should require to do this at least, in order to give you a proof.

. . . I can know things, which I cannot prove; and among things which I certainly did know, even if (as I think) I could not prove them, were the premisses of my two proofs. (*Proof of an External World*, p. 30.)

Moore is here maintaining two points, both of which seem to lay him open to criticism. These are (i) that I may have conclusive evidence for asserting p, without being able to prove p; (ii) that, following (i), I may legitimately use the word "know" without being able to prove, i.e. *state* conclusive evidence for, what I claim to know. Thus Moore is implicitly stating a rule for the proper use of "know," a rule which is directly incompatible with the rule, favoured by Woozley and others, that you cannot legitimately use "know" unless you *are* in a position to prove what you claim to know. It is precisely around this question that Professor Barnes has concentrated his criticism of Moore (*The Philosophical Predicament*, pp. 41–2); and, whether we agree with Barnes or not, we may well start to scratch our heads over problems like these: (1) What is it to "have" but not to be able to "state" conclusive evidence? (2) Can it be legitimate to use "know" in philosophical discussion without stating conclusive evidence, if it is illegitimate so to use it in ordinary talk? (3) If it is justifiable to use "know" without being able to state conclusive evidence, either in philosophical discussion or ordinary talk, can "I know" mean anything more than "I am certain" —i.e. was not Locke right after all? (4) If those philosophers are right who claim that if we cannot state conclusive evidence we do not know, then what is our criterion for determining that we do have conclusive evidence in matters of fact? Or, more shortly, what constitutes *conclusive* evidence?

The solution, or rather the proper way to approach this dispute between Moore and his adversaries, becomes immediately clear once we realize what Moore is really doing; and the question of "conclusive" evidence, which has so worried more than one philosopher, becomes entirely otiose. If you claim to *know*, as Moore did, that two human hands exist, you are in effect announcing that you have decided to accept the evidence of your eyes, without the further analysis indulged in by some theories of perception, or that you have decided, for some reason or other, to use terms strictly in accordance with common sense. If someone wishes to quarrel with Moore, it is no good picking on his half-apologetic admission that he cannot state conclusive evidence—nor is there any point in bothering about evidence at all. For the question of evidence in disputes of this kind is a trivial one; not because evidence is irrelevant to

epistemological analysis but simply because the relevant evidence is transparently obvious and therefore not worth arguing about. If I hold up my hand in a room full of people and say "Here's one hand," it would be pointless to ask me what is my "evidence" for this assertion, although a philosopher might justifiably ask me how I analyse the expression "Here is" and the word "hand." We often, it is true, make empirical statements which involve optical and other illusions, from the famous bent stick in the water to the sick person's distorted and the drunkard's fantastic perceptions; and we are understandably intrigued by double images, after-images and all the other curious perceptual paraphernalia which psychologists have brought to our notice. But in these cases of illusory, abnormal or unusual perception the philosopher's job is surely to *analyse* the evidence provided by the psychologist or physiologist; it can hardly be his job to discuss whether we do in fact have conclusive or any other sort of evidence for the appearance of, say, after-images, for the evidence is already there and scarcely disputable. If, therefore, someone thinks that Moore has failed to analyse "Here is" and "hand" properly, or to analyse them at all, he is perfectly entitled to put forward his own analysis and to argue for its adoption; but it is a waste of time to argue about evidence, let alone conclusive evidence. Even if Moore felt himself able to state all the evidence he claims he has, his "know"-statement would not thereby become any more plausible; for it amounts to no more than that he has decided to apply the canons of common sense to a perceptual situation which is usually analysed, by philosophers, in a sophisticated manner.

SUMMARY

Every case of knowing that S is, was or will be P involves, when analysed, some decision or the acceptance of some decision. This applies equally when you are discussing the so-called tautological propositions of logic and pure mathematics; for you can only claim to "know" that some logical or mathematical proposition is true because you have previously decided to accept that certain meanings shall be attached to certain words, or that certain symbols shall function in a certain way. When we examine what philosophers are doing who demand that we prefix "we know" to this or that part of their analyses of perceptual situations, we find that they are often using "know" in a question-begging manner in order to buttress some particular, and usually contentious, analysis. Nor is any philosopher in a position to lay down rigid and precise rules for the proper use of "know" in ordinary conversation; although he can usefully debate the nature and cogency of the grounds on which

decisions, issuing in "know"-statements, are generally made. Lastly, Austin is quite right in claiming that when I say "I know" I give my authority and pledge my word, which I do not do when I merely say "I believe"; but I give my authority and pledge my word only because I have decided, or accepted a decision, that so and so *is* the case.

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DISSOLVING THE "PROBLEM" OF INDUCTION [1]

R. HARRÉ

I PROPOSE to elaborate some hints dropped by Mr. Strawson[2] in order to relieve those pressures of language that have led philosophers to pose and attempt to answer the pseudo-question, "How is induction justified?" Once the source of these pressures is exposed we can turn our attention to the real problems of induction, namely how particular inductive procedures are justified, without feeling that a deeper problem remains always to be solved.

In essentials Strawson's dissolution runs as follows. There are two kinds of questions you can ask about induction;

1. How is *this* particular discovery-procedure justified? An answer will be provided by reflecting on general standards of reasonableness, and by considering how far the procedure to be justified accords with these general standards.

2. How are these general standards of reasonableness to be justified? It is Mr. Strawson's concern to show that this is a meaningless question.

Its meaninglessness is made to appear by the setting up of an analogy. We can ask "Is this particular law legal?" and can provide an answer by reflecting on, say, the way the law accords with the general body of law, the Constitution. To ask "Is the Constitution legal?" is to ask a meaningless question for there are no further laws and no higher body of laws (aside from general moral and political principles) with which the Constitution could be compared for decisions as to its legality. To compare the Constitution with itself is not to make a comparison at all.

Justification, in the context of induction, is to be understood as an appeal to general standards of reasonableness. To ask of general standards of reasonableness whether they are justified is to ask "Is being reasonable reasonable?" and the meaninglessness of the question in this form is evident.

A different approach to this problem is implicit in Professor Toulmin's *Philosophy of Science.* He is concerned to show that there is a great variety of kinds of statement appearing in a science. Few of these kinds require inductive justification, for their satisfactoriness is determined in other ways. Induction is a method peculiarly adapted to the setting up of empirical generalizations and if empirical

[1] This is a shortened form of a paper read to the Ockham Society at Oxford, November 8, 1955.

[2] P. F. Strawson, *Introduction to Logical Theory*, Chapter IX, Part 2.

generalizations play a small part in science the frantic urgency of those trying to justify the procedures used for justifying generalizations is misplaced. Toulmin's main distinction is between what he calls principles and other kinds of scientific statements. Principles lay down certain ways of proceeding, they represent a resolve to use a certain inferring technique in a science. Deductions are made, not from them, but in accordance with them. Being resolutions about techniques they are not arrived at as generalizations of evidence, they are not compendious ways of stating multitudinous observations, but show, as it were, an attitude to facts. So-called "confirmation theory" gets no grip on principles, for they do not call for confirmation from instances or evidence. A principle is not confirmed but adopted. Toulmin's basic discontent seems to be with the way philosophers *describe* scientific statements and procedures. A more careful description while destroying perhaps the simple scheme that animates the work of Carnap[1] and Braithwaite[2] will direct attention to the real problems of metascience, and away from those minor difficulties that grow to unreal proportions in an obsession with one kind of picture.

I want to take this idea of the pervasiveness of misdescription and apply it to the "problem" of induction. From this standpoint I believe we can see the pressures that give rise both to the unreal description of science removed in part by Toulmin, and to the interest in the clearly meaningless question "Is induction justified?" I am not proposing an alternative to Strawson's dissolution of the problem but a supplementation of his procedure.

Philosophic discussions of scientific matters in general and of discovery-procedures in particular, have been and often still are carried on by the use of a certain vocabulary of terms. Scientific procedures are evidently connected with reasoning of a kind, and the philosophers' "reasoning" vocabulary is used to describe them. For example, scientists are popularly supposed to equip themselves with a number of "particular" statements, and then to announce a "general" statement. The "particular" statements are therefore described as "premisses," the "general" statement as "a conclusion" and the whole complex is called "an inductive argument." The move from the "premisses" to the "conclusion" is called "an inductive inference." Once this description is given it is very easy to start looking for schemata that show the form of the "argument," and then to start asking questions about the "validity" of the schemata that emerge. This roughly characterizes Mill's programme, and the methods he presented are the fruit of a search for the schemata of inductive "arguments." (Carnap is only more elaborately naïve.)

[1] R. Carnap, *The Logical Foundations of Probability*, Chapter I.
[2] R. B. Braithwaite, *Scientific Explanation*, Chapter I.

I wish to raise doubts about the application of *any* of this vocabulary to what we ordinarily do in making inductions and particularly to its perniciousness as a vocabulary for describing what scientists do. What is basically wrong with this vocabulary can be explained quite simply. It is the vocabulary of deduction, and the concepts it forces us to apply to inductive procedures are the concepts proper to deduction. For example the notion of validity is so specifically wedded to deduction, that it is no more than caricature to describe the satisfactoriness of an inductive-procedure as a kind of validity; and yet this is constantly done. There is no need to cite examples of these misdescriptions, for almost any account of induction in almost any logic book contains scores of examples. However careful writers are to disclaim any belief in inductive validity being the sort of validity that characterizes deduction, the pressure exerted by the constant misuse of all the terms mentioned above distorts their appreciation of the differences between inductive-procedures and deductions.

This distortion shows itself very clearly in the belief that so many logicians seem to have that there is *a* procedure of induction, and that a search, if made carefully enough, will reveal *an* inductive logic. Everyone knows that deductions belong to a common deductive logic, and once the misdescription of other reasoning procedures is made, that is description in the vocabulary proper to the description of deductive logic, we are led irresistibly to suppose that all other reasoning belongs to a common inductive logic. Once we stop using this inappropriate vocabulary we are free to look around at the multiplicity of ways of reasoning. When we become convinced of this multiplicity we are prevented from asking "Is induction justified?" for we are no longer forced to think in terms of *an* inductive logic, and *a* common inductive procedure. We see that there is no such process of reasoning as induction (there are no *general* standards of reasonableness everywhere appealed to) and *a fortiori* its justification can no longer be a question that bothers us, for it is not a question that can even be raised.

I have yet to show that a belief in an inductive logic is inappropriate. This can most easily be done by examining the way scientists *actually* speak about their procedures. They must be caught off their guard, as it were, when they are uncontaminated by philosophy. Scientists are least self-conscious in their technical articles in the scientific journals, and it is to the methodological asides in these articles that we must go for a proper understanding of the procedures that they use. Here are some examples:

1. "Evidence was presented that indicated that. . . "[1]

[1] *Journal of the Chemical Society*, 1955, p. 1778.

2. "On plotting V against $\sqrt{c}$ a curve was obtained from which a rough estimate of . . . was obtained."[1]

3. "In such cases in order to obtain a fair comparison the mean of those values that are in reasonable agreement has been used, a widely divergent result being omitted."[2]

4. "The method adopted by all these workers was to fit a suitable curve to the ionization histograms and to determine the mode of the fitted curves."[3]

5. "This assumption was subsequently justified by the computed results."[4]

6. "We suggested that . . . it has been possible to confirm this guess."[5]

7. "From the above considerations we draw the conclusion that. . . "[6]

These are all *scientists'* asides about the way they arrive at laws in particular cases. Only one, the last, is couched in standard philosophic terms. This process, "drawing a conclusion" turns out from an examination of the context to be an ordinary deduction, where a statement is derived from others of the same generality.

That there is no common logic of which the seven procedures selected above are exemplifications can be shown readily enough. But first I should like to make clear that it is inappropriate even to call them all inferences. If inductive procedures are not inferences, then to ask for their form of inference is pointless. When we "make an inference" we arrive at a conclusion from one or more premisses. But we don't arrive at this conclusion blindly, we arrive at it according to a law. For example, "From today being Tuesday I infer that tomorrow is Wednesday," is based upon a *form* of inference, the hypothetical "If today is (were) Tuesday, then tomorrow is (would be) Wednesday." Any inference can be exhibited, after it has been made, as an argument.[7] Further the argument will have or lack logical cogency, and can be called good or bad by reference to the rules of deduction.

Now consider the sort of thing that a scientist actually says about the procedure he adopted. For example we find "These results suggest that. . . " where the gap is filled with a general statement. One thing being suggested by another is not like one thing being inferred from another. There *is* no law which could be established or pointed out to be the expression of a convention that would satisfy everyone as the foundation of a case of one thing being suggested by

[1] *Journal of the Chemical Society*, p. 1901. [2] Ibid., p. 1902.
[3] *Proceedings of the Physical Society*, September 1955, p. 795.
[4] Ibid., p. 833. [5] loc. cit. [6] Ibid., p. 835.
[7] This is very clearly discussed by Professor G. Ryle, "If, so, because" in *Philosophic Analysis*, ed. M. Black, p. 323.

another. It is significant that we ask "What does this suggest *to you*?" We don't move against your assertion of a different statement from what we say it suggests to us by saying "No, you're wrong. You see . . . " and state a law. We try to persuade you to somehow *see* things differently. Discussion may lead us to agree to what you have to say, but if we assimilate suggestion to inference, this feature of suggestion would have the odd consequence that after beginning the dispute by pointing out the law according to which the "inference" is made we might be persuaded to come to withdraw the "inference," which by hypothesis we took on the basis of the law, *without* withdrawing the law. In cases properly described as suggestion, what can be disputed is what the situation suggests to you, not how you *arrived* at the result you did. There is, of course, no law according to which a set of things suggests other things to people. For example "The inclusion of Miller suggests that Australian bowling is weak" contrasts with "From the inclusion of Miller we can infer that Australian bowling is weak," most readily from the way we would dispute them. For example to the former we might reply, "It doesn't suggest that at all, it suggests they need more batting strength at six or seven," which is a dispute about what you have said the situation suggests. To the latter we could only reply in the form "Weakness in bowling doesn't necessarily mean that you include all-rounders," which is to dispute a law or general rule about the selection of cricket teams, and only indirectly to dispute the inference about *this* selection.

Suggestion is not a form of inference, nor is guessing, nor making assumptions, nor summing up, nor fitting curves to histograms nor finding modes, nor plotting one thing against another, nor are any of the things that scientists say they do, except deduction. That they do occasionally infer is no more reason for saying that they always infer, than the discovery that they sometimes guessed would be a reason for saying that they always guessed. An obsession with one kind of example, with one model of procedure, or with any one way of describing can generally be relied upon to lead to mistakes, and the more deep-seated the obsession the more pervasive the mistakes. Obsession with a particular vocabulary is the surest philosophic trouble-maker of all.

The failure of the analogy with deduction does not of itself show that there is no single procedure of induction, no room for an inductive logic (the weaker claim). This must be shown by a closer examination of actual inductive procedures. Investigation shows that there are in fact many quite different kinds of procedure. Two ranges can be selected immediately, one I shall call intuitive-procedures and the other mechanical-procedures. I call these *ranges* of procedures because they are determined rather by family resemblance, than by

all being supposed to be characterized by their exemplifying one or other of two schemata. We must resist the temptation to look for such schemata. Some intuitive-procedures are guessing, assuming, suggestion, judging and so on. Mechanical-procedures are curve-tracing, averaging, finding a mode, curve-fitting, establishing functional relations and so on. Other ranges of procedures can be characterized by the kind of statement they issue in. The two I have chosen to consider are those most closely related to the traditional idea of science as generalization. Some of the other ranges of procedure are characterized by ending in explanatory statements, principles of inference, derived laws, statements of limitation on generalization, statements forming part of a model, and so on. To return to the establishment of generalizations; we must first distinguish clearly between intuitive and mechanical-procedures. In the first place justification of intuitive procedures will generally be given in psychological terms. The notion of "gestalt" will probably prove important as well as the related notion of symmetry. Psychological explanations will be directed towards showing that some given way of arranging the data of experiment, and some given way of regarding it will lead to *satisfactory* general statements. The word "satisfactory" is used very frequently indeed by scientists, while the word "true" is rare. Justification of procedure must turn in the end upon the criteria that scientists in fact use for decisions about the satisfactoriness of general statements. These will, of course, vary greatly with the *kind* of generalization being proposed, and with the science which is its context; but at least these criteria must include considerations, often conflicting, of the simplicity and fruitfulness of the generalization proposed. (Criteria for the satisfactoriness of scientific statements other than generalizations, will be correspondingly different.) Just what the criteria are in any given range of cases is a matter to be determined by a careful analysis of scientific language and theory-structure, and I do not propose to enter into that here. It is sufficient to point out the place of these criteria and the consequent character of justificatory explanations. A psychological justification of a procedure is of course not a logical justification, but is not for that reason pointless.

Justification of mechanical-procedures on the other hand, will turn on totally different kinds of consideration, though these will be designed to satisfy similar criteria of satisfactoriness to those that the psychological justification should satisfy. For example we might set about showing that fitting a curve to histograms will provide a satisfactory generalization. The way *this* should be shown would necessarily be different from the way a simplicity selection from among possible functional relationships would be shown to satisfy certain criteria of satisfactoriness. The particular procedures that belong to the

mechanical-procedure range have in common their mathematical character, but the *ways* they provide generalizations are formally very different. So different are they in fact, that no common schema of procedure which they all exemplify *could* be constructed. Drawing a curve *through* points is a totally different *kind* of procedure, *vis á vis* science from drawing a smooth curve *among* points.

The two ranges of procedures so far distinguished in detail exhibit not only great and fundamental diversity within their range but are evidently as ranges of procedures fundamentally different. There are temptations to assimilate these ranges one to another. From the evident fact that smooth-curve drawing generally follows a gestalt of the points used as a basis for the curve, we might be tempted to suppose that curve-drawing of all kinds could best be justified, so far as its simplicity character is concerned, by psychological discussions of gestalt formation, and that the way of choosing functional expressions related to the curves we choose among is simply a more sophisticated way of satisfying a psychological urge for economy represented more overtly by the character of a gestalt. (This is roughly the position taken by Duhem).[1] The temptation to move in the other direction comes from our using the vocabulary of deduction to misdescribe both ranges of procedures. From the evident fact that judging, say, on the basis of evidence requires evidence and issues in judgement (called misleadingly drawing a conclusion inductively from premisses) and that the setting up of a functional relationship, say, requires experimental evidence as a basis (which is also on the deductive model misleadingly described as drawing a conclusion inductively from premisses) we are led by our misdescription to see them both as exemplifications of some common schema. Clearly both these temptations must be avoided, and they will not arise provided we take care not to misdescribe. More generally, the less pressing, but none the less pervasive temptation to assimilate all scientific statements to the generalization/observation-statement model will be more easily resisted. If we are not committed to a description in the restricted and restricting vocabulary of deduction the true multiplicity of function and character of scientific statements and discovery-procedures is freed for our consideration.

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[1] P. Duhem, *The Aim and Structure of Physical Theory*, especially Part 1.

DISCUSSION

COULD MACHINES BE MADE TO THINK?

Dr. F. H. George (*Philosophy*, July 1956, p. 244) appears to be so dazzled by what very complicated machines are said to do and so bewildered by loose metaphors of illiterate technicians, that he has never stopped to observe a few simple cases to see what machines do, that is machinelike, and what men do, that is sometimes machinelike and sometimes not. Let me suggest a few examples, the first ones fictitious.

Once it occurred to a Mr. Smith that potatoes would be better to eat without their skins. It also occurred to him that he could tear off the skin with his finger nails, but it would be a slow and messy business. He therefore constructed a mechanical substitute for finger nails, and peeled his potatoes with a knife. His friends, who had not seen this done before, said: "What a clever chap Smith is! He *thought* of making a knife to peel potatoes." They did not say: "What a clever knife to *think* of peeling potatoes!" Later, Smith's ambitions increased and he constructed a peeling machine that would handle a ton of potatoes in an hour. His friends still said that Smith did the thinking, not the machine, however fast it peeled potatoes.

Later on still, having had his fill of potatoes, but observing the difficulty of counting the large numbers being peeled, Smith said to himself: "Just as finger nails can be used for peeling potatoes, but a machine does it better; so fingers and toes can be used for counting, but a machine should be better. Let me see if I can make a calculating machine." So he made an abacus and it performed well and quickly. Then his ambitions increased and he made a slide rule. Smith's friends still said that he was clever to *think* of machines to do his calculating for him and did not say the machines were clever to *think* of calculating.

Now for an historical example: James Watt fitted a governor to his steam engines so that they would run at constant speed with varying loads; the first instance of "negative feed-back." His friends said that he was clever to think of making a governor, not that the governor was clever to think of adjusting the throttle to keep the speed constant. But they might have some slight excuse for making a mistake here. A man with his hand on the throttle of the engine and his eye on the fly-wheel can do what the governor does, though not so well. The man has to *think* to co-ordinate eye and hand from moment to moment, since these instruments are not *preadapted* for that special co-ordinating process, but are *adaptable* for many processes. Active adapting calls for thought. The governor is designed for one co-ordinating process and no other; its various parts are preadapted. For that reason no governor needs to think. All the thinking has been done for it beforehand; by Watt, by the makers and fitters, by the operator of the engine who finally adjusts throttle and governor to the speed, which he *decides* to be the speed required for that engine doing that work.

An instrument can be devised to imitate any one action of any one organ of the human body. If it performs that action quicker or more precisely it may be worth making; otherwise not. Complicated machines are combinations of instruments by means of which several simple processes are co-ordinated in a predetermined way. However mysterious to the uninitiated, a machine only does those special things it has been made to do and no others—as long as it is working properly. A machine does not deal with unforeseen situations, and

if it does something not predicted (in principle) it is said to have broken down.

Now for another parable: Mr. Smith is playing a game of chess against a chess-playing machine (called "Robot") designed by his rival inventor, Mr. Brown. Mr. Brown himself and an invited audience are watching the play. During the course of the game Smith looks up from the chessboard and winks at a pretty girl in the audience. The wink is a product of thought, of initiative, of free decision; it therefore has *meaning* of some sort. It may mean that Smith thinks he has discovered the system of moves on which Robot has been built to work, that he can circumvent it and win the game. He may be wrong. Or his momentary shift of attention may cause him to misinterpret Robot's next move, and he may lose. Whether he is right or wrong or wins or loses the wink has some meaning for Smith and for the girl too. Suppose, however, Robot looks up and winks. That has no meaning for Robot, nor for the girl unless she is very silly. It can have only one meaning, and that one for Brown, who does not think that Robot thinks, but stops the game and has Robot taken back to the works for a thorough overhaul.

I have said that thinking involves choice or decision. On a superficial view a balance might appear to "choose" or "decide" whether the right hand pan shall come down or the left. In fact the balance has no choice; it is predetermined that the right-hand pan always comes down when it bears the heavier load, whatever the actual things may be which are put on or how they are put on. The choice does not lie with the balance, but with the man who made it and the man who puts the loads on the pans.

In the foregoing account I have tried to avoid the terms of "introspective psychology" out of respect for the feelings of those who find them improper. So far as I understand Dr. George, his only substantial accusation against Dr. Mays is that he is guilty of this kind of impropriety.

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NEW BOOKS

Philosophical Essays. By A. J. Ayer. (Macmillan. 1954. Pp. ix + 289. Price 18s.)

These essays by one of the most distinguished of living British philosophers deal with logic, ethics and theory of knowledge. As anyone familiar with Professor Ayer's writings would expect they are invariably clear, concise and vigorous. Whether he is explicitly formulating another philosopher's position, as in "The Principle of Utility," or reformulating and amending views current at the time the paper was being written, as in "On the Analysis of Moral Judgements," he usually succeeds in stating them more clearly and more cogently than their original authors.

If there is a tendency in all Professor Ayer's writings to see philosophical problems in black and white, to make clear-cut conceptual divisions where boundaries seem shifting and fading, it is less marked here than in his earlier work. The Verification Principle, with its claim to sort out genuine from pseudo-propositions was characteristic of this tendency. It was no doubt the use to which this principle was put that caused one of the literary Sunday newspapers to refer to "that blunt instrument of assassination *Language, Truth and Logic.*" It is interesting to note that, in spite of the prominence given to this principle in the earlier book, it is nowhere mentioned in these essays. Yet even in these papers there is a lack of interest in the nuances of ordinary language which makes the author seem at times to be almost a survival from a more assured and dogmatic past.

It is no part of Professor Ayer's philosophical method to inquire too narrowly how such words as *substance, characteristic, individual,* etc., are used in ordinary language. For instance, the first essay of the volume is on "Individuals." The opening sentence runs as follows:

> "The distinction between individuals and properties is a commonplace of logic; but it is easier to illustrate than to define. For instance, I am an individual, so is the after-image that I saw a moment ago, so is to-morrow's sunrise, so is the French Revolution and the British Army, so is the collection of all the sheets of paper in this room" (p. 1).

Having pointed out that individuals are contrasted with properties Ayer goes on:

> "It may be indeed that this distinction is not exhaustive. It would appear strange, for example, to speak of the liberal tradition, or the American Constitution, or the theory of relativity either as properties or as individuals" (ibid.).

What is missing here is any attempt to find out how ordinary people use the term *individual* or even how philosophers have used it. In the most ordinary sense, in which *individual* is used as a noun, Ayer is surely right in saying that he is an individual; individuals are persons. But in this sense after-images, sunrises, etc., are not individuals. In its adjectival use, I can ask for information about each individual after-image, sunrise, revolution, army, tradition, constitution. It is puzzling to find it said that the French Revolution is *clearly* an individual and the American Constitution is not, or is only very doubtfully one. Not that I think Ayer would be at all worried by this sort of objection. He is concerned to devise a way of talking which will rescue him from such difficulties. And the rest of the paper is a proposal

to talk not about individuals and properties but—changing from the material to the formal mode of speech—about predicates and indicators. The discussion is interesting, but too involved to summarize. One question most interestingly canvassed is: Are indicators merely shorthand predicates? Another is: Could we manage with a language consisting entirely of predicates?

The paper "The Terminology of Sense-data" is of special interest as it includes, in two notes added for this volume, a reply to points Professor Moore had made in reply to the paper. Ayer had maintained that the question whether a part of the surface of his hand which he is seeing is, or is not, to be accounted a sense-datum could not be solved by analysing standard usage, since there is no standard usage of such a term as sense-datum. Moore held that the problem could be so solved since it could be reformulated entirely in terms having a standard usage. Suppose someone to say "This is a penny" at the same time making a gesture of pointing. Moore holds that "this" refers to a sense-datum. Ayer's comment, which has certainly great plausibility, is that where I am looking at a penny, "this" denotes the penny; where I mistake some other object for a penny, "this" denotes the other object which I so mistake; where I am completely hallucinated, "this" denotes nothing at all. "It is," he writes, "a mistake to identify the meaning even of a demonstrative with its denotation" (p. 80, *note*).

Plausible as this is however, I still feel a slight difficulty, though I am not sure that it is a genuine one. Suppose I say "This is a giraffe" (pointing one way) and "That is an elephant" (pointing another way) and suppose that, in respect of both I am hallucinated. Then we *want* to say that "this" denotes something different from "that" and to say that both alike denote nothing seems curiously inadequate. It may be that the explanation is that they indicate, when accompanied by appropriate gestures, places. Whether we say that they indicate nothing at all or indicate places, these two accounts have in common that denoting or indicating is a public relation. I denote or indicate only what is there for others as well as myself. But don't I sometimes indicate *to myself* what is private to me? What is my attention directed towards when I am hallucinated with the vision of a giraffe? Perhaps the alternative to Ayer's view can be stated without the use of the term sense-datum. Suppose I were to say that by "this" I was referring to the giraffe which had just appeared on my right. I meet the objection "But no giraffe appeared." I might then say "By 'this' I was referring to what appeared to be a giraffe on my right." Even though in fact there was nothing which appeared to be a giraffe there is still a use for the phrase "what appeared to be a giraffe" in a sense in which it is not replaceable by "nothing." And I think we might say that, though the word "this" *indicated* nothing it did nevertheless *refer* to "what appeared to me to be a giraffe." (I have abandoned Ayer's word "denote" because it does not seem so normal a word as "indicate," though sometimes used in place of it, and in addition it has a technical use in connection with the doctrine of denotation and connotation.) "What appeared to me to be a giraffe" shares in common with imaginary characters such as Mr. Pickwick the fact that it cannot be indicated though it can be referred to by a demonstrative. What differences it is that I can perform operations of *pointing*: I can, as it were, point it out to myself, because it is possible for me to see what appears to be a giraffe either here or there or somewhere else. This view would be a half-way house between Professor Ayer and Professor Moore. "This" and "that" would refer, for example, to a giraffe or to what appeared to be a giraffe. On the former case they would indicate something, viz. a giraffe; in the latter case they would have only private reference. But, although we might regard "what appeared to be a giraffe" as roughly

corresponding to one of the things meant by the term sense-datum, there is no necessity to suppose, when there is a giraffe at which I am pointing, that it is anything other than the giraffe which is indicated as well as privately referred to.

Sometimes Ayer defends explicitly a particular rejection of ordinary usage. In "The Analysis of Moral Judgements" he admits that the view "which I still wish to hold" (p. 231), that what are called ethical statements are not really statements at all is incorrect since it is quite good usage to say that when someone characterizes an action by the use of an ethical predicate he is thereby describing it. But he argues that it is preferable to use the word statement so as to exclude ethical judgments, on the grounds that "there is no procedure of examining the value of the facts, as distinct from examining the facts themselves" (p. 237). (How difficult it is to find language in which to draw this distinction may be seen from the fact that one can *inquire into* or *consider* the value of the facts or, in more ordinary parlance, the merits of the case, as well as inquire into or consider the facts.) For the rest, Ayer's paper develops an attitude or emotive account of ethics (he does not distinguish between the two) on lines which were already familiar at the time (1949) and are even more familiar now. He is at pains to insist that morals are not unimportant on this view. It remains true that, on certain forms of emotive theory, they would be. And perhaps what Ayer had said, in *Language, Truth and Logic* was one such form.

The paper on "The Principle of Utility" is a straightforward and very clear account of Bentham's ethical principle. It contains one interesting suggestion. Bentham is usually thought to have been inconsistent in setting up as the end of government "the greatest happiness of the greatest number," because two criteria are in fact set up, quantity of happiness and wide distribution of happiness. Ayer suggests that what Bentham meant was merely that "one of the most important factors, by which the total quantity of happiness would be determined was the number of persons whom the action affected, and that no matter who these persons might be, the interests of all of them were alike to count" (p. 257). If I understand the suggestion correctly, this amounts to saying that the expression "the greatest happiness of the greatest number" involves no inconsistency but that the words "of the greatest number" are redundant, just as the words "of the greatest purity" would have been redundant if Bentham had said "the greatest happiness of the greatest purity." I think this *may* be what the principle was intended to mean by Bentham. But I think he may have meant by "the greatest happiness of the greatest number" what I think the expression would more naturally mean, viz. "the greatest happiness, subject to its being as widely distributed as possible." On this interpretation *extent* would take precedence over intensity, length, certainty, speediness, fruitfulness, and purity, the six factors to be taken into account in reckoning quantity of pleasure. After mentioning these six factors in his well-known rhyme Bentham proceeds

> Such pleasure seek, if *private* be thy end:
> If it be *public*, wide let them extend.
> Such *pains* avoid, whichever be thy view:
> If *pains* must come, let them *extend* to few.

It seems quite consistent with these verses to suppose that, in the case of public action, extent is to be sought above all other factors.

There is a third ethical essay on "Freedom and Necessity." This is an admirably clear and helpful essay on a most obscure topic. Once again one is struck by the confident use of rather odd language. "Either it is an

accident that I choose to act as I do or it is not" (p. 275). Surely there is something odd even about asking whether it is an accident that I choose to act as I do? If I have let someone drop, the question whether it was an accident or not, whether I let him drop deliberately or accidentally, is intelligible. If it was not an accident, then I let him drop deliberately. (We should not normally speak of *choosing* to let him drop but someone *might* say, to make the point clearly "You could have held on to him, but you deliberately chose to let him drop.") What we ask about choosing is not whether it was accidental or not but whether it was one's own idea or whether someone else put it into our head; whether I realized properly what I was doing when I chose or not. Choice may be properly called arbitrary, but not properly called accidental. (Except when by choosing we refer, as we often do outside philosophy to doing something, e.g. choosing a card.)

Yet sometimes ordinary usage seems to weigh with Ayer in the essay. Its general theme that "it is not . . . causality that freedom is to be contrasted with, but constraint" (p. 278) is argued with close attention to ordinary usage. As Ayer points out I can be compelled to do something without being deprived of the power of choice, e.g. if I do what someone tells me to do while pointing a pistol at my head, "he can legitimately be said to have compelled me" (p. 279). But would it not have been consistent with his procedure elsewhere, e.g. in rejecting the claim of ethical statements to be statements, for him to have asked "Is it wise to go on speaking of compulsion here when after all the man could have refused?" (I do not suggest that this would be the right course in either case.)

Ayer's conclusion is that I could have acted otherwise if (i) I should have acted otherwise if I had so chosen, (ii) my action was voluntary in a sense in which the actions of a kleptomaniac are not and (iii) nobody compelled me to choose as I did. All this is consistent, he thinks, with my action being explicable in terms of cause and effect and, in theory, predictable (which is all that determinism holds). What makes people fancy some inconsistency is animistic and mechanistic metaphors introduced into the notion of causation. That my actions are predictable is not to say that they are done under constraint.

I have had time to say something about only a few of the essays in the volume. Just as interesting are the other essays, on "The Identity of Indiscernibles," "Negation," "Basic Propositions," "Phenomenalism," "Statements about the Past" (an ingenious development of a view about time held in its general form by Russell, though one that seems to me misguided), "One's Knowledge of Other Minds," and "On What There Is." The statement on the jacket of the book ends with the sentence: "The collection as a whole is inspired by the belief that philosophical problems are capable of being solved by the process of logical analysis." It would be interesting to learn from Professor Ayer what his conception of logical analysis is and just how it is related to investigation into the meaning of ordinary language. Meanwhile this volume affords us some specimens of the process in action, and we must be grateful for the clarity and incisiveness of the specimens.

WINSTON H. F. BARNES.

The Life of Reason or Phases of Human Progress. By GEORGE SANTAYANA. One volume Edition revised by the author in collaboration with Daniel Cory. (Constable, London. 1954. Pp. viii, 504. Price 42s.)

The first four volumes of *The Life of Reason* appeared in 1905, the fifth in

1906. They ran to over 1,300 pages of about 280 words each. The present text of 500 pages has about 430 words to the page. The new abridgment has thus cut out between one third and one half of the old text. It was made by Santayana and Mr. Cory in 1951, when Santayana was 88. He died the next year. The omissions include some entire chapters, a certain amount of controversial and illustrative material, and a number of summaries, including the marginal paragraph headings. A number of changes of phrasing have been made with the object of avoiding misunderstanding. There is thus a revision as well as an abridgment, not in the sense that any new doctrines have been introduced, but in the sense that certain possible developments originally suggested have been cut out. The result has been to produce a greater unity. But I am not sure that the reader's task has been made any easier than it was 50 years ago. The book was reviewed in January 1907 by G. E. Moore in the *International Journal of Ethics* (not in *Mind* as Mr. Cory quotes Santayana as saying) who complained of its want of clearness. The review in *Mind*, also in January 1907, was by Henry Barker, who made the same complaint. In such a work, said Barker, "one looks, if not for the severity of a dialectical demonstration, at any rate for a connected series of propositions established by consecutive argument." He found instead sweeping generalizations lacking the necessary qualifications, and thought the whole work far too ambitious. In America, F. J. E. Woodbridge, of Columbia University, was much more enthusiastic. I have not been able to see the review which he says he wrote in the New York *Nation*, but he tells us[1] that he found in *The Life of Reason* "a matchless commentary on our human thinking." ". . . the reading of Santayana has acted upon my own thoughts like a catalysing agent, dissolving them and recombining them in ways better suited to my own satisfaction at least." ". . . through reading him I seem to have won for myself greater freedom and clarity in the handling of my ideas."

There is no doubt that this is just the kind of effect Santayana would have wished his work to have. He was never an academic philosopher in spirit; he taught philosophy with the object of becoming financially independent as soon as possible, and resigned his chair in Harvard as soon as he had accomplished this. "I have never been," he says, "a diligent student either of science or of art . . . My pleasure was rather in expression, in reflection, in irony: my spirit was content to intervene, in whatever world it might seem to find itself, in order to disentangle the intimate moral and intellectual echoes audible to it in that world."[2]

A Spaniard, brought up as a Catholic and always profoundly touched by the devotional side of Catholicism though never accepting its doctrines or those of any religion as true, torn from his roots in Spain in his youth and educated in Boston, but oscillating between Spain and America, he felt himself rootless, déraciné,[3] and it was natural for him to take the role of detached onlooker, with no special bias toward this or that system of philosophy. In a sense his philosophy is that of an onlooker, so far as events are concerned. The material world, the world of events, of causes and effects, ceaselessly changing, is neither good nor bad in itself, and neither has nor embodies any purpose. Organisms, and all the bodily changes that take place in them, are a part of this material world. Consciousness is generated and controlled by it, reflecting and expressing it in its own way. Thus the mind, as he puts it later[4] is "a concomitant spiritual expression," of the material world "invisible, imponderable, and epiphenomenal, or as I prefer to say, hypostatic: for in it the moving unities and tensions of animal life are synthesized on quite another plane of being, into actual intuitions and feelings."

[1] *Contemporary American Philosophy*, II, 415.
[2] *C.A.P.* II, 248.
[3] See Santayana, *The Middle Span*, p. 130. (Constable, 1947).
[4] *C.A.P.* II, 254.

The human animal is interested in, pays attention to, those things in its environment to which its bodily constitution predisposes it at the moment; what advances its interests it holds good, and what thwarts them bad; and its intellectual and moral life turns on this principle. "Every ideal expresses individual and specific tendencies, proper at some moment to some natural creature; every ideal therefore has for its basis a part of the dynamic world, so that its fulfilment is problematical and altogether adventitious to its existence and authority. To decide whether an ideal can be or will be fulfilled we must examine the physical relation between such organic forces as that ideal expresses and the environment in which those forces operate; we may then perceive how far a realization of the given aims is possible, how far it must fail, and how far the aims in question, by a shift in their natural basis, will lapse and yield to others, possibly more capable of execution and more stable in the world. The question of success is a question of physics."[1]

Note the onlooker's phrase "we must examine." Santayana does not say "we must act." And indeed he gives consciousness no part in the cause and effect series. The bodily world forms a closed cycle. "Historical theory . . . is a falsification of causes, since no causes are other than automatic" (406). Consciousness is not "a link in physiological processes, processes irrelevant to its intent and incompatible with its immaterial essence" (423). "The causes of morality, good or bad, are physical, seeing that they are causes" (443).

Yet the life of the spirit is not a mere passive reflection of the march of bodily events as seen through the temporary interests of the individual. Interests are multiple and can clash; and a man can look at them critically, and seek for such harmony among them as is feasible. This is the task of reason. The mind can envisage what is not present; can look before and after; and can judge the world as good or bad, or as good here and bad there, according to the interests of the reasoner. "Moral terms are caresses or insults and describe nothing; but they have a meaning to the heart . . ."[2] Santayana often speaks of man as a dreamer, and of his life as madness; he stresses the fundamental part played in it by imagination; and one of the essential things involved in these descriptions is the play of ideas not altogether subservient to the real march of events. In seeking satisfaction of interest, men create myths, as if to assure themselves that the good they seek is a natural power actually existing. Mythology and religion give poetical expression to human aspirations, and this is their only genuine function. "Without confidence in supernatural support, the heart might never have uttered its own oracles."[3]

Human history, then, as it interested Santayana, was an account of the erratic experiments men have made in living—i.e. the attempts they have made to produce a satisfactory harmony among their interests and the imaginative devices they used in these attempts. Such an account he speaks of as "a sort of retrospective politics, an estimate of events in reference to the moral ideal which they embodied or betrayed. . . . This estimate of evolution might well be called a philosophy of history, since it would be a higher operation performed on the results of natural science, to give a needful basis and illustration to the chosen ideal" (402). It is with such an account that the *Life of Reason* is concerned. The fuller account of what he was doing in *The Life of Reason*, given later[4] which is of great interest, is too long to quote, and I can only note the reference.

Science, for Santayana, is an account of the flux of things and its causal

[1] *The Life of Reason*, p. 283. Future references are to this book, except as otherwise specified.
[2] Santayana, *Dialogues in Limbo*, p. 38. Constable, 1925.
[3] *Reason in Religion*, p. 276. Edition of 1905. The chapter in which this sentence occurs is omitted in the new edition.
[4] *C.A.P.* II, 249.

connections, in terms of human experience. The value of science is the light it enables man to get on the possibility of realizing his ideals. "The recognition of the material world and of the conditions of existence in it merely enlightens the spirit concerning the source of its troubles and the means to its happiness or deliverance: and it was happiness or deliverance, the supervening supreme expression of human will and imagination, that alone really concerned me. This alone was genuine philosophy: this alone was the life of reason."[1] Elsewhere he notes two conditions required for living rationally: (1) self-knowledge in the Socratic sense; (2) sufficient knowledge of the world to perceive what alternatives are open to you and which of them are favourable to your true interests.[2] But in speaking of "true interests" he does not mean to suggest that there is one set of interests which would be proper for all men at all times: in this matter he is a relativist and a pluralist. He delighted in gaily coloured spectacle: the forms of good and beautiful were for him "as various and evanescent as the natural harmonies that produce them."[3]

What seemed to him important was "the need of singleness of mind and complete loyalty to the particular virtue possible to each age and to each individual."[4]

The Life of Reason seems to me somewhat uneven in quality. Book II, *Reason in Society*, is I think the least good; Book III, *Reason in Religion*, the most characteristic and suggestive. Next to it in my estimation comes Book V dealing with Science, and then Book I, on *Reason in Common Sense*. I had expected Santayana to be more exciting and exhilarating in his treatment of Art (Book IV) than I actually found him, though he has many penetrating things to say, e.g. his discussion of obscure emotions and feelings which without art would fail to find objects (319). But doubtless each reader will have his own preferences. The book does not date: it is still as fresh as ever, and I would add, likely to prove as enigmatic to a new reader.

L. J. Russell.

Nature, Mind and Modern Science. By Errol E. Harris. (London: George Allen and Unwin, New York: the Macmillan Company. 1954. (Muirhead Library of Philosophy.) Pp. xvi + 455. Price 35s.)

Professor Errol Harris is a latter-day representative of the Absolute Idealist tradition, who has here produced an extensive critical survey of the history of philosophy so designed as to lead the reader towards a philosophical position derived from that school. His work, which is incidentally remarkably readable, is thorough, learned and well-documented, and adequate criticism of its details would require as large a space again.

According to Dr. Harris, the central problem for all philosophy, past and present, is that of the relation of mind to its objects. Before embarking, however, on his historical survey of this problem, he finds it necessary to dispose of two kinds of objection to his programme: (*a*) objections of what may be called a positivist kind against the possibility of metaphysics, and (*b*) Collingwood's denial that there are any eternal problems in philosophy. Thereafter he turns to survey the treatment of the mind and of nature in the Presocratics, Plato and Aristotle, assigning particular importance to the last, whom he interprets (and develops) in a somewhat Hegelianizing manner. From him he

[1] *C.A.P.* II, 248.
[2] Santayana, *My Host the World*, p. 179. The Cresset Press, 1953.
[3] Santayana, *Persons and Places*, p. 166. Constable, 1944.
[4] Santayana. *The Middle Span*, p. 155. Constable, 1947.

passes over directly to Descartes and Locke, whom he criticizes at some length, as he does also Berkeley and Hume, the former of these more sympathetically than the latter. The chapter on Kant is entitled "Transition to the Modern View of Mind," and sees the *Critique of Pure Reason* as in part a foreshadowing of Hegel but in part still infected by relics of 'empiricism,' of what Dr. Harris calls "the Renaissance view of nature."

The dominant conception in the modern view of nature is, according to the author, that of evolution, and to this he now turns. He finds in Spinoza and Leibniz germs of the system he wishes to develop (this is interesting but, especially in the case of Spinoza, something of a *tour de force*), and then turns to Hegel, for whom he has the greatest admiration, but whom he also notes as refusing to allow the possibility of evolution in nature through time and criticizes for separating philosophy completely from science, relegating the latter to the realm of the understanding. Philosophy since his day is considered to have been on the whole a retrogression—Bradley and his realist adversaries, and above all the whole movement which Dr. Harris labels "modern empiricism": Russell, sense-datum theories owing much to him (Moore, Broad and Price), and the kind (or kinds) of view found in the logical positivists of the thirties and those who have come under their influence. The final section of the work turns to what the author considers more positive trends; after reviewing the ideas of system and organization in biology, he turns to his use the idealistic tendencies in Eddington and Jeans, and finally examines the conceptions of development and creativity in Bergson, Alexander and Whitehead. Of the last of these he is particularly appreciative, noting in him considerable affinities with Hegel. A last chapter draws the threads together.

It will be seen that the book is by no means lacking in matter. Its nearest parallel is a work which is much shorter, but to which it owes much, Collingwood's *Idea of Nature* (both find merits in Hegel's philosophy of nature, and both admire Whitehead, to name only two points). If one is to criticize Dr. Harris adequately, one must clearly fasten first and foremost on his central contentions, viz. the assertion that the main problem of philosophy is that of the relation of mind to its objects; the assertion of an overlap between science (in a wide sense, including psychology) and philosophy; and his attack on what he calls empiricism, i.e. the belief that the external world exists independently of mind. Now it is clear that these three views, though not absolutely inseparable, are closely connected in Dr. Harris's argument. The relations of science and philosophy are nowhere made very precise, but it is plain that philosophy is conceived as a kind of super-science of an all-embracing kind for which the term "metaphysics" would be appropriate. Clearly the point cannot be argued here, but those who, like the reviewer, think that he is here led seriously astray will not be slow to suggest that this conception encourages him to despise that analytic work which at any rate philosophy can do. They may add that an example of the large but illusory problem with which philosophy is then called upon to cope is that which Dr. Harris places in the centre, viz. that of the relation of mind (or the knowing mind) to its objects. Stated simply like that it can surely have no answer. It follows, then, that to attack a certain group of philosophers for having given a mistaken answer is to go off on the wrong track. This vitiates the attack on "empiricism," for what the book means by "empiricism" is the theory that the external world exists independently of the mind. Now this is what is ordinarily called realism, not empiricism, and one result is that Professors Moore and Broad, who would not ordinarily be called empiricists, are here classed as such (ch. xv); on the other hand, Dr. Harris is apparently influenced at the same time by the ordinary sense of "empiricist," as denoting one who denies

a priori knowledge of facts, and it is in this sense that he classifies as empiricists Hume, Russell (in his theory of neutral monism) and the logical positivists, none of whom are empiricists in his official sense (Berkeley's position seems to be dubious). (In any case, has philosophy a single central theme? Surely Collingwood had after all an important point to make.) Knowing all this, we are not surprised to learn that Berkeley's idealism is defended on the ground that to speak of unsensed *sensibilia* (or the like) involves a contradiction (pp. 142 ff.), while the summary given above has made it clear that Dr. Harris is markedly unsympathetic to the contribution to the philosophy of science made by what would ordinarily be called the empiricist tradition. Like many other thinkers, he is least convincing when dealing with those towards whom he is antipathetic, and this is particularly true in his treatment of twentieth-century philosophy (though his discussion of perception is careful and good points are made, especially in criticism of phenomenalism (e.g. pp. 313 ff., 330 ff.)). This side of the book is further marred by criticisms of modern formal logic which would not help the main argument even if they were sound (pp. 340 ff., especially 344–8), and by vague attacks on recent work in the philosophy of mathematics (p. 384). What surprises the reader is that, after all this disparagement of the analytic movement, Dr. Harris finds himself (pp. 449–50) in close sympathy with the central theses of Ryle's *Concept of Mind*: something must have gone wrong somewhere. (One further word: may one suggest that in discussions of recent philosophy the use of the term "empiricism" can easily be overdone?) On the side of his positive views, it would be interesting to know how he would answer the objection that his stress on evolution was in danger of being geocentric. Further, the antithesis of teleology and mechanism which appears at several points needs to be re-thought in the light of the conception of self-regulating and self-maintaining mechanisms. As for modern physics, how is indeterminacy in the sub-atomic realm to be viewed as an expression of mind?

But it would be wrong to end on a purely negative note, when the work contains much that is suggestive and sound. I should like particularly to mention the discussions of Plato (despite the adoption of the unplausible Burnet–Taylor hypothesis), Leibniz, Hegel, Bergson and Alexander. As a philosophical scholar of wide range Dr. Harris is worthy of high respect. Again, he is saying what is true and important so far as he is arguing that modern science is like Aristotle's, and unlike that of the classical seventeenth century tradition (though like that of Leibniz), in presenting one with a *scala naturae* to be understood in terms of complexity of organization, though one vastly more complicated and no longer purely static.

D. A. Rees.

Hopi Ethics. A Theoretical Analysis. By Richard B. Brandt. (The University of Chicago Press. 1954. Pp. x + 398. Price £2 16s. 6d.)

There are about 4,000 Hopi, Pueblo Indians living on high rocky ground in Arizona. The community is divided into three parts, each living on a Mesa or high table land about 15 miles from its nearest neighbour. From about 1880 till 1930 (when a change of policy was introduced) the U.S. Government used various means to bring the Hopi way of life more into accordance with white man's ways, and Christian missions helped in this. The Hopi living on Third Mesa (present population about 1400) seem to have been more affected than the rest by these efforts, and the process of acculturation was accelerated by the recent war, when many of the young Hopi either served in the U.S. army or did

various kinds of war work. It is with the Hopi living on Third Mesa that Professor Brandt's study is concerned; and he makes no references to any possible differences in acculturation between them and those of the first and second Mesas. It is useful to compare his study with e.g. the report given by Laura Thompson in *Culture in Crisis*[1] based on wide investigations made by a team of workers on the Indian Personality and Administration Research staff. Her conclusion is that the Third Mesa is a problem area, showing far greater disturbance of the old habits than the rest of the community, and that it is hazardous to make inferences about the Hopi from work done on Third Mesa alone. This should be borne in mind by readers of Professor Brandt's book.

His method was that of the interview. In the spring of 1946 he got into touch with 26 persons of varying ages, some men, some women, and in two later visits in 1947 and 1948 he did more intensive work with six of these, farmers or farmers' wives, whose ages varied from 55 to 80, trying by various types of question to find out what actions they thought right, what wrong, what reasons they had for doing so, and what their affective reactions were. He started with a list of typical virtues and vices considered important by modern whites, and sought to discover how far the Hopi list differed from this. There is a danger in this mode of approach, especially when combined with the method of interview, conducted by an investigator ignorant of the Hopi language, in some cases through an interpreter. One may miss the typically Hopi nuances, by gently leading one's subjects to concentrate on those aspects one is interested in oneself, and to leave aside considerations, never easy to disentangle even for a person practised in self-analysis, which give a distinctive colour to their outlook. Especially when one is asking for reasons for their views: the kinds of questions one asks in prodding one's subjects into expression, may lead to corresponding kinds of answer. I think Professor Brandt has turned his Hopi into something much more like rational utilitarians than I suspect they actually are, and that his accounts of the changes that have taken place in their ethical valuations in consequence of contacts with the whites somewhat oversimplify the whole process. It must also be remembered that the persons he was able to interview were among those most friendly to white influence; the most conservative of the Hopi on Third Mesa refused.

There is a good deal of independent discussion of ethical concepts in the early part of the book by way of preparation for his enquiry, and in the later part he seeks theoretical principles by means of which, given non-ethical facts about the Hopi and about their physical environment one can deduce what their ethical attitudes will be toward certain types of conduct, and consequently what their ethical norms will be. He does not claim that the principles he actually suggests are the only principles involved in the formation of their ethical attitudes, nor that they can explain all ethical attitudes; he does not even claim to be expressing them in a finally satisfactory form; but he does hold that something like these principles is a necessary part of any explanatory set, and also that they are by themselves sufficient to explain certain of the Hopi ethical attitudes.

The word "ethical" is used in the sense in which it involves the notions of obligation, duty, praiseworthiness or its opposite, and feelings in relation to duty, remorse, guilt etc. (55). "Attitude" is a dispositional term, involving tendencies to have particular affective reactions, including felt impulses to act, under certain circumstances (59–60). For an attitude to be ethical the reaction must be disinterested, i.e. it must not be "causally dependent on any of the individual's personal desires (except his desire to act rightly and to be the kind of person he thinks he ought to be) or attachments for particular persons or

[1] Harper, New York, 1950.

attitudes toward social groups or statuses" (64), and this point is stressed and developed at length.

His two principles, which he names "the theorem of reward" and "the theorem of utility," are psychological, and he spends some time justifying them on the basis of modern psychology. The former says "An individual tends to develop a certain ethical attitude if the expression of it in behaviour has been rewarding to him and if he believes that the expression of it in behaviour has been or will be rewarding to him" (305) and the latter says "Individuals tend to have unfavourable (favourable) attitudes toward an act of a certain sort (*a*) according as they believe such acts have generally unfavourable (favourable) effects and (*b*) according as they themselves have experienced, either personally or vicariously through the known life-history of persons to whom they are attached, such unfavourable (favourable) effects" (309). Although the second theorem does not explicitly say so, it, like the first, is concerned with ethical attitudes.

It should be noted that in his exposition and use of his psychological principles Professor Brandt makes no reference whatever to the characteristic of disinterestedness which he says is involved in an ethical attitude; and I doubt whether he could do so. The transition from experiences concerning the particular satisfactions and dissatisfactions of an individual, or concerning utilities, to disinterested judgments about acts, is one of the traditional difficulties of any utilitarianism which relies wholly on psychological principles, and Professor Brandt has done nothing to meet it. A favourable or unfavourable attitude is one thing; an ethical attitude, as defined by him, is something very different.

Further, Professor Brandt claims that his psychological principles and certain non-ethical facts logically entail that the Hopi will or will probably have certain ethical attitudes. I have two doubts here. Firstly, many of his facts are already dependent on Hopi ethical views; and secondly, what he infers does not seem to be logically entailed by his premises. Let me consider these in turn. (1) Among the facts he mentions (301) are "the individual's own past experience with interpersonal relations, his insights into the effects of alternative courses of action, and his non-moral goals or values." He uses also the individual's beliefs about the world, including beliefs (whether empirically testable or not) about the consequences of certain types of action. Of these the only clearly non-ethical items are insights into the effects of alternative courses of action, and beliefs about the world which are empirically testable, though even in these cases a person's existing moral attitudes may lead him to stress or to minimize certain effects, or to link causally events which have no genuine causal relation: e.g. a Hopi who believes that certain breaches of morality on the part of an individual will lead to death or illness in the family has his belief confirmed by the occurrence of such illness or death. The other items cannot be described as non-ethical. An individual's experience of interpersonal relations is clearly affected in all kinds of ways by the moral values of the members of his society. Again a goal can be described as non-moral in any particular society only if it is regarded as unobjectionable from the point of view of the norms of the society, and what is non-moral in one society will be morally tinged in another.

(2) The traditional way of life of the Hopi was agricultural and pastoral. Rainfall is low, and prolonged drought meant scarcity. Winds could cause severe damage to crops. The Hopi believed that the course of events in nature depended on their behaviour as a community. Serious breaches of the Hopi moral code by members of the community would make things in the world go wrong. The important rain-making and other ceremonies had to be conducted

with proper decorum if they were not to fail in their effect; and this involved not only sexual continence on the part of the participants, but also good thoughts and attitudes on the part of the rest of the community. Ambition, competitiveness or desire to excel, quarrelsomeness, boastfulness, were bad attitudes; social friction was a thing to be avoided. Worry, and bad thoughts, could cause illness and even death. Hard work, co-operativeness and thrift were highly prized, and every effort was made to accumulate a large store of food, to last for several seasons, in case of failure of crops. They believed that some people were sorcerers, with power to cause illness or death, drought and winds; and this was one reason why it was thought prudent not to resist an aggressor.

This is, of course, only a small selection from the attitudes and beliefs of the Hopi. Their social institutions, and especially their complex family system with its marriage arrangements and its modes of ownership and its distribution of work, and their clan organization with its relation to the various important ceremonies, are closely bound up with their attitudes and beliefs, and throw a good deal of light on them.

What Professor Brandt does is to take particular attitudes out of this entire constellation, and to try to show that they can be deduced from the facts by the use of one or other (or perhaps both) of his psychological principles. He argues e.g. (323 f.) that food being so important and so difficult to come by, the theorem of utility enables us to deduce that the Hopi would be likely to object to wastefulness, and put a high value on thrift. This would be sound if thrift were prescribed by utility in these circumstances, and if all people had the same notion of utility as Professor Brandt has. But there are many other ways by which people could meet this situation. They might move to other territory where conditions of life were not so hard, fighting anyone who stood in their way. Or they might live in a happy-go-lucky way, feeding well when times were good, starving when times were bad. Again, some people might react in one way, some in another, and these differences might be significantly related to social status. If the Hopi as a whole met the situation by thrift, other factors than utility must be brought in to show why.

What Professor Brandt can show is that given the existing moral values of the Hopi, any individual Hopi can (*a*) see some reason for them, using the principle of utility and (*b*) be confirmed in his acceptance of them by being rewarded when he behaves in such a way as to show approval of them. But this is far from what he expects his theory to do, which is, ideally, to deduce the whole ethical constellation from completely non-ethical data.

How far short he falls is I think seen in his treatment of the Hopi attitudes toward quarrels, drunkenness, adultery, etc., where he takes as one of his basic facts, the fact that the Hopi object greatly to social friction, and suffer greatly from public disapproval. It is of course easy to show, if you start with this, that the Hopi are likely to object to any acts which lead to social friction. But what we want to know is why they have so intense a dislike for social friction. And for that, it seems to me, it is necessary to bring in principles such as those used by various schools of anthropologists, including both the historical diffusionists and the functionalists, whom he attacks sharply for neglecting psychological principles. I do not think any anthropologist does try to do without showing, on psychological grounds, that an individual member of a community will have good cause, on the whole, for conforming to the norms of his community, though his loyalty may be strained on occasion. But this is not enough; and I do not think that Professor Brandt has done sufficient to suggest that his principles could give what he hopes to get from them.

I have no space to discuss his treatment of the changes that have taken place

in recent times in the attitudes of many Hopi in consequence of white influence. Here his task is somewhat easier, because he can start from the full constellation of Hopi attitudes. But here again it seems to me, it is necessary, for a full understanding of these changes, to work out more thoroughly than Professor Brandt does (though he sometimes hints at it) the ways in which the family and clan structure have tended to disintegrate, and the influence of this disintegration on Hopi character and outlook.

Even if the foregoing criticisms were completely justified (and no doubt Professor Brandt would have plenty to say about that) I should still regard the book as an important contribution to the study of Hopi ethics. It is in addition more than this: it is a study of ethics, and it is the more suggestive as a study of ethics for being directed toward an understanding of the Hopi. Professor Brandt writes clearly and with vigour, and his book is to be heartily welcomed.

L. J. Russell.

The Pragmatic Humanism of F. C. S. Schiller. By Reuben Abel. (King's Crown Press, Columbia University, New York. 1955.)

A book upon the philosophy of F. C. S. Schiller was certainly overdue, and Mr. Abel, who writes from the New School for Social Research in New York, has produced one that is worthy of the subject, and is written, as such a book should be, with a genuine but not uncritical admiration of the man and the thinker. His assessment of Schiller is, I think, not unfair, granting certain basic assumptions; and he gives a valuable bibliography of Schiller's published books, articles and reviews and of books and critical articles which either deal with his opinions directly or have close relevance to them. He might among these have mentioned Prof. Gallie's "Penguin" book on Pierce and Pragmatism.

Schiller's most significant period was, it can hardly be doubted, the epoch-breaking decade which ended with the outbreak of the first World War, during which time he had established himself as one of the liveliest and most stimulating (or irritating) of the philosophers teaching at Oxford. The attitude to him of philosophically more orthodox tutors was somewhat ambiguous: was his doctrine to be placated or merely snubbed? Students were not necessarily discouraged from attending the heretic's lectures; but the recommendation if given carried defensive overtones; the lectures, one gathered, would probably be found interesting, and almost certainly amusing. Such an attitude to a very likeable academic colleague is at any rate a tribute to the genuine originality and brilliant personal idiosyncrasy of Schiller's criticism. He was a very gifted raider into philosophical enemy territory, and from an unexpected and unguarded quarter.

Yet I do not think that Mr. Abel gives quite a fair picture of Schiller's opponents; small blame, for the whole scene has so completely changed. They were not by any means so "monolithic" as he implies, the Bradley-Bosanquet school had other vigorous critics besides Schiller. And to Bradley himself he is unfair in implying a misuse of his Oxford influence to the detriment of Schiller's career, without any evidence being suggested. If Bradley, who, I believe, in fact held aloof from such matters, had expressed an opinion adverse to Schiller's claims it would have been because he honestly thought him to be a clever but superficial thinker. And I can find no tolerable meaning in the assertion that Bradley tried to "drive a wedge" between Schiller and William James.

The phrase suggests malice of a personal kind, whereas I suppose all that need be said is that Bradley tried honestly to show a divergence between the two of a purely philosophical kind.

But there can be no doubt that late Edwardian Oxford philosophy amply deserved the onslaught of this unusual critic, independent, completely irreverent towards established reputations, immensely high-spirited, whose attack exhibited now the intrepidity and *panache* of a Cyrano de Bergerac and now the flippant facetiousness of the clever undergraduate. His opponents had been "asking for it," if only because of the quite unpardonable disparagement, and even sometimes absolute denial, of the scientific status of psychology. For those were the days in which William Macdougal was ploughing his lonely and (in Oxford) unappreciated furrow, and in which an Oxford philosophy tutor was said to have met the plea that within the next decade Oxford should have a really adequate school of psychology with the query: "Won't they have seen through it by that time?" Yet this was just the time at which Freud's *The Interpretation of Dreams*, appearing for the first time in English, was to open the floodgates of the new Psychology! *Sancta simplicitas!*

But this suggests a curious trait in Schiller's thought. Mr. Abel rightly stresses the all-importance he attached to the relevance of the psychological occasion in the interpretation of knowing and thinking. Relevance to the purpose and experiential setting is always insisted on by Schiller as crucial; ignore all that and thought becomes abstract, divorced from life and therefore from meaning which cannot be so divorced. One would have thought that this would have predisposed him to align himself with the Freudian movement in which personal and psychological considerations were claimed to play so crucial a part in apparently rational and logical processes. But in fact we are told (and to those who didn't know it this is a most interesting comment upon Schiller's mind) he had an antipathy to the whole psycho-analytic movement. And another odd anomaly is suggested by the deservedly brief account of Schiller's "Social Philosophy." Here, too, one might have thought that the man who preached personalism, the contribution of every mind to the shaping as well as to the elucidating of the real world, would have found his true political home among the democrats and upholders of "the common man" rather than with authoritarian systems and the regimentations of Fascism. Are not these two inconsistencies symptoms of a failure of the thinker to work out his position on a large front that incorporated diverse tracts of experience—symptoms of something irresponsible in his polemical writing? One can hardly refrain from using the military metaphor; and as already suggested, Schiller is the raider, or the commander of auxiliary light troops rather than the planner of a campaign worked out with elaborate military logistics.

Yet what gallant and effective raids they are! Mr. Abel's own comments are eminently sensible; he sees, for instance, the occasions on which the pragmatist overplays his hand and the impossibility of a too thorough psychologizing of logic. But he very wisely leaves Schiller for the most part to explain —and expose—himself, by stimulating in the reader some critical protest when persuasive exaggeration or fine rhetorical one-sidedness engenders the suspicion of a sophistry somewhere. Yet again and again along with this will be true and penetrating insights, expressed with admirable clarity and pungency. For at his best Schiller was a fine stylist—if style is the capacity to say what one means with the maximum of effectiveness.

I think it is a tribute to Mr. Abel's success that by his wise and copious choice of passages from Schiller's own works to illustrate his exposition he will certainly make many readers wish to read and re-read *in extenso* more of the

works of this the third of the three champions of Pragmatism in the first decades of this century; James, Dewey and F. C. S. Schiller.

One final question may be raised, not discussed at all by Mr. Abel. Pragmatism in the form it had thirty or forty years ago is, one supposes, today a chapter of philosophic history; what was of importance in its contribution has been allowed for and digested into other types of thinking. But a still very much alive, if not growing, philosophical movement, that of Existentialism, has at any rate certain features that remind one of Schiller's protests. It would be interesting to learn how far the affiliation is a genuine one.

JOHN W. HARVEY.

Studies in Ancient Greek Society: Volume II: The First Philosophers. By GEORGE THOMSON. (London: Lawrence and Wishart. 1955. Pp. 367. Price 27s. 6d.)

This is the second of a series of volumes designed to "re-interpret the legacy of Greece in the light of Marxism." The perennial question about Greek philosophy is "Why did philosophy begin with the Greeks?" Professor Thomson rightly rejects answers such as Burnet's, which amounts to an avowal of ignorance ("Because the Greeks were 'born observers' with 'exceptional reasoning powers' ") and looks for an explanation in the social conditions of the time. But he also rejects Farrington's answer in terms of techniques (despite colourful anecdotes about Thales), because such techniques were common to the peoples of Mesopotamia who developed no philosophy. His own startling thesis, argued at great length and with the immense resources of scholarship at his command, is: "Because the Greeks invented coinage."

The story of an intellectual development from primitive thought which is "practical, concrete and subjective" to the "theoretical, abstract and objective" thought of philosophy and science depends on Marxist anthropology and Marxist economics. The *differentia* of humanity is the activity of production. Thought is geared to production, which is a social activity; hence, society and nature are thought of as one, and this conception finds expression in magic and in myth. A division between "manual and mental labour," that is, between production and the organization of production, leads to a leisured class free to devote itself to *theorizing;* the development of commodity production (that is, of goods for exchange and not, as in "primitive communism," for consumption) leads to the concept of a "universal equivalent," *i.e.* money, which represents the first major *abstraction*; and both the divorce between production and consumption, and the assignment of "exchange value" to products, involve the recognition of *objectivity*. Thomson follows Cornford in tracing a continuity between the Milesian school and Hesiod's *Theogony* and going back through Crete and Phoenicia to Babylonia (he adds interesting parallels from China, Mexico and Polynesia). But this is the mythical ingredient. What is new, the philosophy, is specifically Greek, because the power of theoretical abstraction had to receive its impetus from the habit of economic abstraction practised by the first large-scale commercial society. At the same time, just because the thinkers were not producers, theory was out of touch with practice and the result was the Platonic theory of Ideas, which represents the culmination of Pure Reason. The whole of Greek philosophy becomes, in a memorable phrase of J. E. Raven, a "prolonged symposium."

There is a subsidiary thesis concerning slavery, which is held responsible for the doctrine of the soul as distinct from, and imprisoned in, the body, and ultimately for the development of idealism. The prisoners in Plato's famous

Cave are the wretched chain-gangs in the Laurion silver mines, whose bodies belong to others; hence the idea of a "disembodied self" and the denial of the real world, which is the Orphic element in Platonism, in strong contrast with the materialism of the Ionians. Materialism means excluding man from nature: idealism means excluding nature from man.

Into this economically conditioned evolution each individual philosopher is neatly fitted. The three fundamental postulates of Thales, Anaximander and Anaximenes—a common beginning of the universe, the self-generating property of motion, and the conflict of opposites—are in origin "nothing more than a projection of the structure of the tribe." Pythagoras reveals "the characteristic outlook of the new merchant class . . . engaged in the exchange of commodities on a scale unprecedented." Heraclitus in his own words (Fragment B 90) compares fire with *gold*. The Parmenidean One (which is set parallel with the Jehovah of Isaiah) is a product of "the new mode of thinking brought into being by the social relations arising out of a monetary economy." And so on, even to the rules of Aristotelian logic; until we arrive at the Epicurean atoms which reflect the self-sufficiency of the individual in an age of political disintegration, just as the particle in Newtonian mechanics corresponds to "the 'free' bourgeois producer." Every philosophy, in short, is an ideology.

Many of Thomson's examples of philosophy "reflecting" social conditions are convincing; many more are intriguing; a few strain our credulity beyond the limit. There is more than a suspicion of the a priori method he condemns in others: not basing a general thesis on instances considered separately, but interpreting all cases in terms of a preconceived doctrine. An example is the ancient problem of motion. Up to Parmenides, matter was self-moving. After Parmenides, matter was inert and required a source of motion, such as the Mind of Anaxagoras. But instead of explaining Aristotle's Prime Mover as a more or less logical consequence of Parmenides' denial of motion, Thomson argues that it is "the ideological expression of the ownership of homogeneous slave labour." (The "prolonged symposium" is not allowed a logic of its own: every stage in the argument proceeds, not from the previous stage, but from external conditions.) And similarly, Zeno's paradoxes are defeated with a mere whiff of dialectics:

> Zeno dismissed the concept of motion as an illusion, because it contains a contradiction. . . . The truth is, of course, that just because it contains a contradiction, the concept of motion is a faithful reflection of reality.

Despite occasional excesses of this sort, the book is an exciting contribution to the history of philosophy, and is to be much admired for its inventiveness, its range of learning, its intense conviction, and not least for its remarkable freedom from emotive language, intolerance or contempt of bourgeois achievement. There are, of course, long and frequent extracts from Marx, Engels, Lenin and Stalin, but most of these can be by-passed with little loss since their function is not so much to illuminate as to authenticate.

BERNARD MAYO.

History and Doctrines of the Ājīvikas (A Vanished Indian Religion). By A. L. BASHAM. (London: Luzac and Co. Ltd. 1951. Pp. xxxii & 304. Price £2 2s.)

This work, based on a thesis approved for the Ph.D. Degree of London University, is the first full-length study of the Ājīvikas, a sect once vying in

importance with Buddhism and Jainism, but which has long ceased to have active followers.

In the intellectually prolific sixth century B.C., three important non-Brahmanical sects developed in the same region of India, based respectively upon the doctrines of Buddha, Mahāvīra (the founder of Jainism) and Makkhali Gosāla, the traditional founder of Ājīvikism. Mahāvīra and Gosāla appear to have been in partnership at one stage, but later to have become antagonists. Closely allied to Gosāla were Pūrana Kassapa the antinomian and probably Pakudha Kaccāyana the atomist, whose doctrines were adopted by the later Ājīvikas. Dr. Basham remarks that it is Makkhali Gosāla, rather than Mahāvīra, who emerges (in the early texts) as the Buddha's chief opponent and most dangerous rival.

Of the three heterodox doctrines, the author considers that Ājīvikism, with its rigidly controlled cosmos, was the most appropriate to a closely knit autocracy. He suggests that it is significant that it seems to have reached its period of greatest influence in the time of the Mauryas (as we infer, for example, from Asoka's inscriptions), when Indian government attained a higher degree of centralization over a larger area than at any other period before the nineteenth century. Ājīvikas survived in South India until the fourteenth century A.D., in spite of discriminating taxation, whilst in the North they seem to have been almost forgotten (p. 166).

The cardinal point of the doctrine of Makkhali Gosāla was a belief in the all-embracing rule of the principle of order, *Niyati* ("compulsion"), which ultimately controlled every action and all phenomena, leaving no room for human volition. Upon this strict determinism rested "a superstructure of complicated and fanciful mythology, incorporating an atomic theory which was perhaps the earliest in India, if not in the world."

According to the Ājīvika theory of causation, the universe seems to have been thought of as a continuous process, which was recognized by some later Ājīvikas to be on ultimate analysis illusory. The only effective cause was *Niyati*, which was not merely a first cause but in its other aspects was also the efficient cause of all phenomena. The Ājīvika was sometimes called by his opponents "a believer in the doctrine of causelessness" (*ahetukavādin*), or "a disbeliever in the efficacy of works" (*akriyāvādin*). As Dr. Basham says (p. 230), we may surmise that the Ājīvika explained the apparent existence of freedom of choice by the postulate of a double standard of truth (viz. *vyāvahārika*, practical and empirical, and *pāramārthika*, absolute). Ultimately, free-will was illusory and *Niyati* the only determining factor.

The Ājīvika teachers of the South held the doctrine that if all future occurrences are rigidly determined and there is no room for novelty in the universe, coming events may in some sense be said to exist already. The future exists in the present, and both exist in the past. Time is thus on final analysis illusory, and if so all motion and change, which take place in time, must be illusory also. "Thus," says Dr. Basham, "we have almost arrived at the system of Parmenides."

It is probable that the atomic theory of Pakudha Kaccāyana, one of the founders of Ājīvikism, was the earliest in India. According to this theory, atoms would combine in fixed proportions into a sort of molecule, that of earth containing four atoms of earth, three of water, two of fire, and one of air. Atoms could not be seen in their pure state, but only when they formed aggregates as *bhūtas* or objects. One Tamil source states that "earth has all sense qualities except sound," but there is no detailed classification like that of the Vaiśeṣika system, and the remaining elements are in no way related to the senses.

Like most ancient Indian religio-philosophical systems, Ājīvikism presents a curious mixture of *naïveté* and advanced thought. Its scientific concept of the nature of atoms was coupled with a theory of the atomic nature of the soul which was but little removed from the soul-stuff theories of the savage; whilst its doctrine of *Niyati*, involving a real recognition of orderliness in the universe, did not rule out a cosmology as fantastic as any.

Since the Ājīvikas left no connected body of doctrine, Dr. Basham's account is based mainly on the passing references of their religious opponents. Though inevitably fragmentary, as he states in his preface, Dr. Basham's work is enriched by his scholarship and enlivened by his refreshing historical sense, and one has the impression that he has made the fullest possible use of the relatively scanty material available to him.

DOROTHY MASKELL.

Aristotle's Criticism of Plato's "Timaeus" by GEORGE S. CLAGHORN. (The Hague: Martinus Nijhoff 1954. Pp. xi + 149.)

This study attempts to show that "Aristotle largely agreed with Plato both in the principles and presuppositions of his natural science." Taking from Bonitz's *Index* Aristotle's references to the *Timaeus*, the author examines the criticism they contain of Plato's conception of the Receptacle, the simple bodies, qualities, motion, time, and soul. In each case he concludes that Aristotle properly understands Plato's meaning and agrees substantially with Plato's view. And in each case his method is to muster as many points of similarity as he can between Plato's view and Aristotle's, and to infer an identity. The subject makes this method a hazardous one, and Claghorn is generally so uncritical in his use of it that the dangers are overlooked; often he seems unable to distinguish points of resemblance which are relevant to his purpose from those which are not, those which are fundamental from those which are only superficial; he is too ready to dismiss differences between Plato and Aristotle as superficial differences, and to assume Aristotle's criticisms to be criticisms of a superficial view of Plato's doctrine which Aristotle is correcting for the benefit of those who, unlike himself, do not properly understand Plato. Thus he argues that Aristotle, in criticizing Plato for the idea of a literal creation of time, is really, by a "subtle undertone" in the passage in question, agreeing with him, Aristotle's argument being directed against a literal interpretation of the *Timaeus* and not against the *Timaeus* itself. There is nothing at all in the passage (*Phys.* 251*b*) to warrant this. Again it is argued that Aristotle understood Plato's view of the Receptacle, and understood it correctly as representing primary matter; further, that Plato's Receptacle and Aristotle's primary matter are similar in so many respects that they "must be the same." Yet Aristotle confesses his inability to make much of the Receptacle, which he thinks too vaguely conceived, and his interpretation and criticism of it appear to be in terms of his own theory of matter and seriously to misrepresent Plato's meaning; Claghorn should have given careful consideration to the arguments for this view (notably those of Cherniss in *Aristotle's Criticism of Plato and the Academy*, Vol. 1, Chapter 2). In other chapters, too, Claghorn tends to pursue a scissors-and-paste method of adopting arguments which support his thesis, and rejecting, without due examination, those which do not. His study is not, indeed, without its merits. Aristotle was indebted to Plato in many aspects of his physical doctrine, and Claghorn is right to emphasize this. But he seems to have little appreciation of Aristotle's motives in criticizing Plato, or of the subtlety of some of Aristotle's

contributions to particular problems—e.g. those of time and place. The result is a work which, in minimizing the differences between Plato and Aristotle, does less than justice to both.

NORMAN GULLEY.

In Defense of Plato. By RONALD B. LEVINSON. (Cambridge (Mass.), Harvard University Press (London: Geoffrey Cumberlege), 1953. Pp. xii + 674. Price $10 (80s.).)

To this work Professor Levinson has devoted an immense amount of labour, and clearly it has been a labour of love. His purpose is avowedly apologetic, that of defending Plato—or, rather, his personal character and moral and political theories—against recent detractors, of whom by far the most important is Dr. Popper, though Mr. R. H. S. Crossman and others are noted also. With its 579 large pages of text, nearly 1,400 footnotes and sixteen appendices, it is astonishing that such a work should be readable, but it is, and that from beginning to end. What is more, it is a powerful reply to much that is said by (in particular) Popper, and taken as an enormously extended review of Volume I of *The Open Society and its Enemies* it does a great deal of effective demolition. On the constructive side, it gives useful studies of many problems of Platonic scholarship, and valuable sketches of several contemporaries of Socrates and Plato; especially valuable are the criticisms of Popper's picture of a tradition of universalistic humanism among the sophists and of his largely hypothetical account of Antisthenes, whom he builds up as a contrast to Plato.

This is all to the good, but further questions obtrude upon us. Are apologetics in place? To write in defence of Plato is surely superfluous; what we need rather is an objective evaluation of his dialogues and their implications, with a comparison of other standpoints, earlier and later. A forensic approach is irrelevant: the watchword should be "sine ira et studio." Professor Levinson can point in self-defence to the detractors he is criticizing; but should one not try rather to rise completely above this level?

There is, however, more to be said. For the book obscures the great merit of Popper's work, that it draws sharp and necessary attention to the gulf which separates Plato's moral and political thought from that of the modern liberal democratic tradition, as exemplified, for instance, in Mill's essay *On Liberty*; that gulf our pedagogic tradition has in the past tended to minimize. (This does not mean that one need countenance Popper's wild assimilation of Plato to the Nazis.) Further, Professor Levinson has rendered his defence of Plato easier by confining himself to the moral and political side of his philosophy; had he extended his scope, the contrasts between Platonism and the main trends of post-Renaissance thought must have impressed themselves upon him more vividly.

But it would be ungracious to end on such a note, when this is not what the author set out to do. He has tried to provide a corrective to recent misjudgments about Plato, and in this he has succeeded very well.

D. A. REES.

The Tragic Finale. An Essay on the Philosophy of Jean-Paul Sartre. By Wilfrid Desan. (Harvard University Press: London, Geoffrey Cumberlege. 1954. Pp. xiv + 220. Price 34s.)

This book is devoted to an examination of Sartre's phenomenological ontology as presented in his chief work, *L'être et le néant.* It is divided into two parts, the first of which is expository and explanatory, while the second consists of comment and criticism. There is an appendix on Sartre's existential psychoanalysis, and there is also a bibliography.

Professor Desan's comparatively short work seems to me to be of real utility and merit. Sartre's language in *L'être et le néant* is frequently very difficult and obscure, and a systematic explanation and clarification of his thought is just what is required. The author illuminates his subject by referring to the relations between Sartre and other philosophers, but he is careful not to interrupt the exposition by unnecessary digressions. It would indeed be idle to pretend that the exposition is Sartre-without-tears. The author set out to reduce the technical vocabulary to a minimum and, when possible, to translate strange terminology into more easily intelligible language; but he admits that in order to preserve the thought he has been driven to employ some unusual grammatical constructions, such as the use of the verb "to exist" in a transitive sense. The result is that the exposition is not always easy going. But the attentive and patient reader will find the understanding of Sartre greatly facilitated; and the expository part of the work might profitably be used as an introduction to the volume with which it deals. Special attention is rightly paid to the all-important account of the "for-itself" or consciousness.

The great merit of the critical part of Professor Desan's book is, I think, that the criticism is internal. The author is far from being a disciple of Sartre, but he does not criticize the latter's philosophy by contrasting it with another system. Rather does he attempt to show its internal weaknesses and inconsistencies. For example, he draws attention to the difficulty of reconciling the thesis that consciousness (*le pour-soi*) is a negation, a void in being-in-itself (*l'en-soi*) with the thesis that all specification of the latter is due to the former. Sartre, the author maintains, does away with the positive character of the ego and yet ascribes to it a continuous positive activity. At the same time Professor Desan is well aware of Sartre's dialectical skill and of his ability as a phenomenologist. He considers, however, that Sartre's chief merit is perhaps this, that he has shown by his own philosophy the inadequacy of phenomenology alone for solving the problems of ontology.

FREDERICK C. COPLESTON, S.J.

Aquinas. By THE REV. F. C. COPLESTON, S.J., M.A. (Penguin Books, 1955. Pp. 264. Price 3s. 6d.)

Aquinas was an obvious candidate for inclusion in the Pelican Philosophy Series, and Fr. Copleston was in many ways the obvious person to do it. The fact that he has treated Aquinas so fully in his *History of Philosophy* is sufficient guarantee that behind the introduction to the ideas of the greatest of the Schoolmen there would be solid learning, whilst his knowledge of contemporary philosophizing means that he is able to counter the inevitable suspicion which the metaphysical system of St. Thomas is bound to evoke. In fact, he devotes a greater part of an introductory chapter to showing that there is a much larger empirical element in St. Thomas than is often realized

by those whose acquaintance with him is very often derivative and at second hand.

He then proceeds to expound the Thomistic synthesis in four chapters, the first discussing the general metaphysical system of Aquinas, the second dealing with God and Creation, and the other two being concerned with the nature of man, his place in society and the moral obligations arising from all this. There is a final short chapter on modern Thomism.

The whole treatment is workmanlike, and the book can be commended to those anxious for a sympathetic treatment of the principles of the philosophical system which, despite much modern criticism, still has an important part to play even in the contemporary philosophical world. For, whilst Aquinas was primarily interested in philosophy as a support to, and a clarification of, a theological system. he possessed an acute mind and stands in the main stream of philosophizing. That stream, it is true, altered its course very considerably with Descartes who was, nevertheless, an heir of the medieval tradition; nor can he be understood at all adequately unless he is seen as such an heir.

It would be idle to deny that the average modern philosophical student inherits a tradition of dislike for what are regarded as the arid *a priori* speculations of the Schoolmen and, for all his attempts to break down this traditional prejudice, Fr. Copleston has not perhaps entirely succeeded in presenting his subject in a way likely to arouse great warmth or sympathy. His treatment does not always make for easy reading, and yet those who are prepared to give him a fair hearing should be able to appreciate his statement that "to those who think that philosophical reflection is grounded in common experience, and that metaphysics has an intimate connection with this experience, it can be a source of constant stimulus and inspiration."

T. Corbishley, S.J.

The Philosophical Movement in the Thirteenth Century. By Fernand van Steenberghen. (Nelson. Pp. ix + 115. Price 15s.)

This book contains six lectures delivered in 1953 by Canon van Steenberghen of Louvain at The Queen's University, Belfast. They are largely concerned with modern controversies about the precise philosophical allegiance of the great names of thirteenth century scholasticism, and the general effect is spoiled for the ordinary reader by the author's attempts, necessarily inadequate in the space at his disposal, to deal with criticisms of positions which he had taken up in previous writings. The public lecture is a bad medium for dealing with controversial topics in which satisfactory arguments must be based on an examination of texts, and too often the lecturer has to fall back on asseveration in place of exposition.

The subject suddenly comes alive in the last lecture when he turns to deal with the issues at stake in 1277, and one is left wishing that the book had dealt more fully with the position of Siger of Brabant, Thomas Aquinas and the Franciscan School. One would gladly know in more detail how far the Aristotelianism of Aquinas differed from the "radical Aristotelianism" of Siger. Canon van Steenberghen is a recognized authority in this complex field and it seems unfortunate that on this occasion he spends so much more time arguing with another distinguished medievalist, Gilson, than in illuminating the subject to the satisfaction of his readers.

T. Corbishley, S.J.

A Philosophy of Potentiality. By Leone Vivante. (Routledge and Kegan Paul. 1955. Pp. 115. Price 14s.)

Signor Vivante describes in human beings and in the universe an activity the existence of which he has been induced to recognize by his studies in romantic poetry. This activity is dogmatically presented in a bewildering succession of forms. It is thought, subjective being, creation, and, especially, potentiality. This potentiality appears in all experience, sensation, emotion, will; it is, for instance, an original, secret cause which sustains and constitutes the will (p. 10). It is essentially the same in all its forms; and, although it is pure potentiality, it is also being. Using scholastic language (but not scholastic clarity), the author writes: "Potency is not the "non-being" which preceeds the act; but coincides with the act" (p. 9). Among other descriptions of this activity are "value" and "power." And from many paralysing remarks we may select the observation that "its ever given objective existence is somehow its own negation" (p. 14). Presently, we discover that the "deeply rooted reality" in question is semi-material and we are not surprised to find ourselves in the company of parapsychological phenomena, ectoplasms, etheric bodies and telepathy. Potentiality has now become a plastic agency which penetrates and transfigures the inert matter of organisms.

In the third lecture we scale the cosmos. We are invited to entertain the hypothesis of an omnipresent "virtuality-actuality," operating throughout the universe, always novel yet always constant, a power (in an excellent phrase) "which remains the same in the eternal New" (p. 39). This pervasive force, we gather, is faintly mental in character. The author wonders whether the "metempirical subject" exists in the stratosphere or at temperatures which approach absolute zero. This whimsical vitalism is applied to artistic vision in Parts II and III; in the latter Part the author finds support for his theories in the writings of D. H. Lawrence.

It would be painful to discuss further Signor Vivante's singular metaphysics.

M. H. Carré.

Studies in Communication. By various authors. Edited by B. Ifor Evans. (London: Secker and Warburg. 1955. Pp. vii + 182. Price 21s.)

John Locke's *Essay* was regarded by its author as an essay in "Semiotic," or the doctrine of signs. Professor A. J. Ayer has also maintained that philosophy is the critique of statements, and his essay, "What is Communication?" stands at the head of this series of papers which were delivered as lectures at the Communications Research Centre of London University in its first year of activity. The convergence of such different disciplines as anatomy, classical scholarship and telecommunication engineering points to an even older tradition in philosophy. And the reverse process—a specifically philosophical contribution to specialist research—is hinted at by an economist's complaint that certain important functions of organizations are obscure without "a clearer understanding of how the imperative mood works."

An introduction by the Provost of University College, describing the foundation, aims and prospects of the Centre, is followed by Ayer's essay, which deals with communication by informative signs and analyses the relation "being a sign of." It adds little to his views which are well known from other sources. Professor J. B. S. Haldane, in "Communication in Biology," describes the communication between cells of an organism by means of hormones which are comparable to Descartes' "animal spirits."

communication between organisms of a species, such as birds and bees; and communication between organisms of different species. This last includes protective coloration, which is equivalent to lying. Haldane raises (but does not answer) the question, how far communication can be regarded as just a form of causation. This is important if we want to know what are the criteria for deciding whether the dancing of bees, as investigated by von Frisch, is a "language" or not.

Dr. Colin Cherry writes on " 'Communication Theory' and Human Behaviour." "Communication Theory" is a branch of applied mathematics developed by telegraph engineers in order to define the "commodity" which they supply. The characteristic property of transmitted signals is that they potentially determine the selection, at the receiver, of ciphers pre-selected at the transmitter. Cherry calls these "signs," but he admits that they have nothing to do with meaning. Nevertheless he suggests that (meaningful) information has to do with selection. Sir Geoffrey Vickers' topic is "Communication in Economic Systems." He surveys the functions of communication channels in different types of organization, and suggests that the Research Centre may well find itself equipped to deal with such seemingly intractable problems as the establishment of proper relations between management, trade unions and the Government.

Professor J. Z. Young adverts to the topic of his Reith Lectures. The "machine" analogy for what the anatomist studies must be replaced by that of an organization. His thesis is somewhat overstated, however, since every revolution in medical theory, including the proposed one, is called a "new language": this begs a lot of questions about the relations between language and theory. Professor R. Wittkower deals with non-verbal communication, in "Interpretation of Visual Symbols in the Arts." His question is the objectivity of criticism: how can statements about works of art be tested? The answer depends on a distinction between four "levels of interpretation" which admit of progressively less objectivity: the literal representational, the literal thematic, the multiple meaning, and the expressive.

Professor T. B. L. Webster, in "Communication of Thought in Ancient Greece," raises a number of intriguing questions. Taking the history of the word *psyche* as his theme, he links the development of philosophy with the linguistic development from co-ordinate sentences linked with "ands" and "buts" to the periodic sentence with subordinating conjunctions; and also with a rapid exploitation of the unique facility, in the Greek language, for abstraction. Unfortunately he does not state explicitly whether the needs of philosophy called into existence the requisite language forms, or whether it was the independent linguistic evolution that made philosophy possible. (Compare Professor Thomson's book also reviewed in this issue.) D. B. Fry writes about "The Experimental Study of Speech," and Randolph Quirk gives an entertainingly illustrated homily on the unremarked specialities, and the unsung virtues, of ordinary spoken English.

BERNARD MAYO.

GEORGE BERKELEY'S *Siris*. By A. D. RITCHIE. Annual Philosophical Lecture, 1954. From *Proceedings of the British Academy*, vol. XL. (London: Cumberlege. 1955. Pp. 41–55. Price 3s. 6d.)

Although long a practising scientist, Professor Ritchie has not chosen *Siris* as his theme in order to pillory it. He is too historically minded to do that. Berkeley's science and medicine, he allows, sit well in Berkeley's time. The

chief aim of the lecture is to say a good word for the polemical purpose of *Siris*, namely, to counter the current mechanistic philosophy. Professor Ritchie calls this the Great Machine theory, and firmly reports that after its long triumph it is on the way out, plainly unable to explain even its immediate field of physical fact. What Berkeley ranged against it was the Great Chain theory, of mixed ancient origin: he documents its details without in all cases approving them, but approves its main principle that the assemblage of natural things and events is not self-explanatory but is shaped and held together organically by a cosmic mind. Professor Ritchie sees a new promise in this *kind* of theory, notably in the form it has assumed in the hands of Whitehead: its difficulties are less weighty, in the present state of our knowledge, than that of the Machine theory. In its Berkeleian form, the phenomenalist emphasis would have to be lessened. The lecture, in the gently astringent style typical of the author, is thus both a restrained commendation of Berkeley and a call to return to metaphysics.

T. E. Jessop.

The British Philosopher as Writer. By the Very Rev. W. R. Matthews. English Association Presidential Address, 1955. (Oxford: University Press. 1955. Pp. 14. Price 5s.)

The aim of the Dean of St. Paul's address is to recall the general reader to the former custom of reading philosophical works for personal profit and delight, that is, reading them as literature. After all, he notes, until not long ago virtually all our philosophers were themselves general readers, and naturally wrote for their like. Besides making the inevitable choices, he commends the writing of Locke and of Butler, which has certainly been unduly disparaged. He is surely right in numbering Hooker in the company to be read. On Coleridge's *Aids to Reflection* he makes the felicitous comment that it contains "enough diffused philosophy to furnish the general reader with thoughts for a lifetime." The criteria being literary, there is no pretence of sorting out into true and false: every system having been mauled with criticism, it is enough for those who love good books that some of the systems give mental enlargement and enjoyment, leaving their general visions before us as possible ways of looking at the world when the arguments for them have been forgotten. When the Dean comes to our contemporary philosophical writing, with its narrowly specialized interests and detachment from the big human questions, he expresses the fear that "possibly the day of philosophy as literature is over."

T. E. Jessop.

The New Outline of Modern Knowledge. Edited by Alan Pryce-Jones. (Gollancz. 1956. Pp. 623. Price 18s.)

Modern knowledge, it seems, has no outline; it has no recognizable pattern or unitary shape. The present volume contains twenty-six articles grouped under headings—as, Art, Science, Politics and Economics—generally maintaining a high standard. But it is a collection, not a symposium: in places a widely different choice of topics might have been made—neither Mathematics nor History finds a place—and widely different material included in the particular articles.

Clearly non-technical subjects lend themselves most readily to popular treatment. But that apart, it is, I think, those contributors who have boldly made what must often be a partly arbitrary choice of theme, who have done best. Mr. Fraser, for instance, on *Writing*, seems, understandably, a little unsure as to what he is supposed to be presenting, and fails to reduce his material to order. The next article, Mr. Richards, on *Architecture*, succeeds better. He takes it as his task to treat of the emergence of modern architecture, its relations to older styles, its connection with technology, and its more obvious aesthetic features. He leaves a clear picture in our minds. Mr. Utley is, I think, especially successful in surveying movements of political opinion over the last twenty years; the subject again invites this treatment. But one could proceed thus indefinitely.

Philosophy is among the hardest of subjects to present popularly, and concise popular presentation is harder still. I fear that here the contributors—Dr. Holloway on *Analytical Philosophy*, Dr. Hawkins on *The Philosophy of Theism*, Professor Zaehner on *The Religious Instinct* and Mr. Tomlin on *Metaphysical Speculation*—have not adequately faced the nature of their task. Dr. Holloway is careful, and judicious in his choice of material; but his sentences are too long and his vocabulary unsuitable. He is anxious to establish the reputability of Analytic Philosophy by tracing its medieval pedigree, and tells us that Ockham anticipated the distinction between formal and material implication. That may be exciting to professional philosophers, but I fear that it can mean little to the layman, for whom—I quote the blurb—the book is expressly written. Dr. Holloway recollects that and briefly explains: "in other words, between the kind of implication that exists because of the logical relation between one proposition and another (determined by their intrinsic logical form), and the kind which exists merely in that the second proposition is never false if the first is true" (p. 22). Poor layman! Dr. Holloway then summarizes the development of Analysis from Moore's *Refutation of Idealism* to the later Wittgenstein.

Dr. Hawkins deals briefly with the Existentialism of Heidegger, Jaspers and Marcel; with various attempts to establish some sort of rational theistic metaphysic; and touches on Absolute Idealism. Parts of his material are, no doubt, excessively intractable; and he is, I think, more readable than Dr. Holloway, but he too fails to come properly to terms with the needs of his putative reader.

Professor Zaehner deals with what we may call the disease of the modern world in terms of Jungian Psychology, and with the Dionysus and the religious urge that, denied its proper expression, erupts in monstrous forms—in Hitlerism and the like. He devotes some space to the claim that Communism is really a religion, meeting religious needs. These the dry formalism of the Church of England leaves unfed; and Nonconformity, relying too much on individual illumination, has spent its force. He follows Halévy—and, as he quaintly notes, Marx—in holding that the Chapel fulfilled a social role, providing an alternative to violence, in the nineteenth century.

Professor Zaehner's frank militancy—among so many nice, nibbling, academic articles, doing justice to everyone in twenty pages—is refreshing; and much of his comment is highly intelligent. But I wonder whether it is a safe historical generalization that hysteria and violence belong only or chiefly to periods and peoples to which religious expression has been denied.

As to Speculative Metaphysics, Mr. Tomlin begins with a rapid survey from Thales through Plato and Aristotle to Aquinas, and from Descartes to Kant, Hegel and Bergson. It is true that he is concerned to pick out only one thread: the relative claims of rational, supra-rational and non-rational

modes of knowledge. But surely he would have done better to present this theme directly, say, with historical references, than to attempt this sardine-packed history. He next defends Metaphysics against Phenomenalism and Positivism; and finally demands a return to what sounds like an Aristotelian—or Neo-Scholastic—Metaphysic. Meanwhile, we are also given a somewhat fuller statement and far more lucid critical discussion of Collingwood's view of Metaphysics, which may serve to remind us that good condensed popular exposition, though hard, is not after all impossible.

DAVID POLE.

The Works of George Berkeley Bishop of Cloyne. Edited by A. A. LUCE and T. E. JESSOP. Volume 7. Edited by A. A. LUCE, D.D. Litt.D. (Nelson. 1955. Pp. viii + 389. Price 30s.)

This volume contains, apart from minor items: (1) Notes for sermons; (2) A letter to a friend who thought of joining the Church of Rome; (3) Primary visitation charge to the clergy of his Diocese; (4) Essays published in Steele's *Guardian* during 1713; (5) Journals of travels in Italy; (6) The original proposal for a College in the New World and the petition to the King; (7) Verses on America (two versions); (8) Mrs. Berkeley's account of his character.

Most readers will probably turn first to (5) and be tantalized by the extreme brevity of many of the entries. Berkeley travelled extensively in Apulia, a district seldom visited then or now, and spent some months on the small island of Ischia, during an illness. He was a keen observer, with an eye for architecture. In these journals we see, already in 1717, Berkeley the economist taking notes of population, exports and the cultivation of the land, and also, long before he ever heard of tar-water, taking notes of medicinal springs and their reputed virtues. He went to considerable trouble to hunt down the semi-fabulous tarantula and its rather more fabulous victims, but came away with meagre and conflicting reports, even from its headquarters at Taranto.

From (1), (2) and (3) we can add to our picture of Berkeley as Churchman and Bishop, but they contain little of his philosophy, which is notably absent from the sermons preached at Trinity College. The S.P.G. Anniversary Sermon is interesting historically for comments on what he had seen of social and religious conditions in America. There is more of philosophical interest in (4), for the essays may be taken as first sketches for the discussions in *Alciphron*. The essays appeared anonymously, but style and contents leave little doubt as to their authorship.

A. D. RITCHIE.

Guillelmi de Ockham: Opera Politica. Edited by BENNETT AND OFFLER. Volume III—H. S. OFFLER. (Manchester University Press. Pp. ix + 322. Price 55s.)

The appearance of this volume indicates the resumption of the production of the eight volumes of Ockham's political writings, the first of which appeared as long ago as 1940. The second volume has not yet appeared, though the publishers hope that publication will be possible within the next two years. Of the present volume it is sufficient to say that the work of editing seems to have been done with all the care which the late Dr. Sikes and his collaborators lavished on the first. It contains the *Epistola ad fratres minores* and

two dissertations, *Contra Johannem XXII*, and *Contra Benedictum XII*. They reveal a side of Ockham which is not often appreciated by philosophers whose knowledge of him is confined to his more strictly logical writings, and in fact the book is probably of greater interest to medieval historians than to professional philosophers. At the same time, since we cannot divide even philosophers into different compartments, the work is clearly necessary for those who wish to have a complete picture of the man and a close acquaintance with the ideas which inspired him.

THOMAS CORBISHLEY, S.J.

Books also received:

DAVID HUME. (Intro. by A. D. Lindsay.) *A Treatise of Human Nature*. In two volumes. Everyman's Library. 1956. Pp. (xxxi) & 258, and (xvi) & 320. 6s. each volume.

ROBERT STRAUSZ-HUPÉ. *Power and Community*. Atlantic Press. 1956. Pp. 134. 12s. 6d.

B. P. BAHIRAT. *The Philosophy of Jnanadeva*. Pandharapur Research Society. 1956. Pp. (x), 220 & 20. Rs. 6.

Trans. and Intro. by W. C. HELMBOLD and W. G. RABINOWITZ. *Plato's Phaedrus*. The Liberal Arts Press, New York. 1956. Pp. (xvii) & 75. 40 cents.

JOHANN GOTTLIEB FICHTE. Ed. and Intro. by Roderick M. Chisholm. *The Vocation of Man*. The Liberal Arts Press, New York. 1956. Pp (xx) & 154. 75 cents.

W. H. AUDEN. *Making, Knowing and Judging*. Inaugural Lecture delivered at Oxford. Oxford: Clarendon Press. London: Cumberlege. 1956. Pp. 33. 2s. 6d.

GOTTFRIED WILHELM VON LEIBNIZ. Trans. and Ed. by Leroy E. Loemker. *Philosophical Papers and Letters*. In two volumes. The University of Chicago Press. London: Cambridge University Press. 1956. Pp. (x) & 1228. 90s.

KATHARINE GILBERT and HELMUT KUHN. *A History of Esthetics*. Revised and enlarged edition. Thames and Hudson Ltd. 1956. Pp. (xxi) & 613. 35s.

JOHN W. YOLTON. *John Locke and the Way of Ideas*. Oxford University Press. 1956. Pp. (x) & 235. 30s.

Proceedings of The American Catholic Philosophical Association. *The Role of Philosophy in the Catholic Liberal College*. The Catholic University of America, Washington. 1956. Pp. 247. $3.50.

LEONARD HODGSON. *For Faith and Freedom*. Gifford Lectures, Vol. 1. Basil Blackwell. 1956. Pp. (vii) & 241. 21s.

ALEXANDER HERZEN. *From the Other Shore* and *The Russian People and Socialism*. (In one book.) Intro. by Isaiah Berlin. Weidenfeld & Nicholson. 1956. Pp. (xxxi) & 208. 15s.

JOHN BOOHAN. *Trumpet-Call of Truth*. The Mitre Press. 1956. Pp. 96. 6s.

L. E. EEMAN. *The Technique of Conscious Evolution*. The C. W. Daniel Company, Ltd. 1956. Pp. 215. 25s.

RALPH TYLER FLEWELLING. *Winds of Hiroshima*. Bookman Associates, New York. 1956. Pp. 136. $3.25.

MORRIS GINSBERG. *Reason and Experience in Ethics*. (Auguste Comte Memorial Lecture No. 2). Oxford University Press. London: Cumberlege. 1956. Pp. 44. 6s.

FRANK E. MANUEL. *The New World of Henri Saint-Simon.* Harvard University Press. London: Cumberlege. 1956. Pp. 433. 60s.

ALAN PRYCE-JONES (Ed.). *The New Outline of Modern Knowledge.* Victor Gollancz Ltd. 1956. Pp. 623. 18s.

EDMUND W. SINNOTT. *The Biology of the Spirit.* Victor Gollancz Ltd. 1956. Pp. (ix) & 180. 16s.

SRI AUROBINDO. *Songs of Vidyapati.* Sri Aurobindo Ashram, Pondicherry. 1956. Pp. 87. No price given.

BASANTA KUMAR MALLIK. *Non-Absolutes.* Vincent Stuart. 1956. Pp. (vii) & 295. 26s.

S. P. KANAL. *Dialogues on Indian Culture.* Panchal Press Publications, Delhi. 1956. Pp. 92. No price given.

JOHN WILSON. *Language and the Pursuit of Truth.* Cambridge University Press. 1956. Pp. (xii) & 105. 8s. 6d.

CRAWFORD KNOX. *The Idiom of Contemporary Thought.* Chapman & Hall. 1956. Pp. (x) & 206. 18s.

THOMAS MUNRO. *Art Education: its Philosophy and Psychology.* The Liberal Arts Press, New York. 1956. Pp. (xvi) & 387. $5.00.

I. M. BOCHENSKI. *Contemporary European Philosophy.* Tr. by Donald Nicholl and Karl Aschenbrenner. University of California Press. (London: Cambridge University Press.) 1956. Pp. (xviii) & 326. 37s. 6d.

W. K. C. GUTHRIE (Trans.). *Plato: "Protagoras" and "Meno."* The Penguin Classics. 1956. Pp. 157. 2s. 6d.

LEWIS A. COSER. *The Functions of Social Conflict.* Routledge & Kegan Paul Ltd. 1956. Pp. 188 and 16. 18s.

VICTOR ZUCKERKANDL. Tr. by William R. Trask. *Sound and Symbol.* Routledge & Kegan Paul Ltd. 1956. Pp. 399. 32s.

PETER VIERECK. *The Unadjusted Man.* The Beacon Press, Boston. 1956. Pp. (ix) & 339. $5.

A. J. AYER. *The Problem of Knowledge.* Macmillan & Co. Ltd. 1956. Pp. (x) & 258. 18s.

THEODORE L. SHAY. *The Legacy of the Lokamanya.* Oxford University Press. 1956. Pp. (xx) & 215. 14s.

Pakistan Publications, Karachi. *Pakistan* 1955–1956. Price R.2, A.8.

VERGILUS FERM (Ed.). *Encyclopedia of Morals.* Philosophical Library, New York. 1956. Pp. (x) & 682. $10.00.

M. TIMUR. *The Theory of Morals.* Elek Books Ltd. 1956. Pp. (xii) & 524. 45s.

BERTRAND RUSSELL. (Ed. Robert C. March). *Logic and Knowledge. Essays* 1901–1950. George Allen & Unwin. 1956. Pp. (xi) & 382. 25s.

W. R. MATTHEWS. *The Religious Philosophy of Dean Mansell.* Friends of Dr. Williams's Library Tenth Lecture 1956. Oxford University Press. 1956. Pp. 23. 3s. 6d.

JAMES K. FEIBLEMAN. *The Institutions of Society.* George Allen & Unwin. 1956. Pp. 400. 50s.

Ed. T. V. SMITH. *From Thales to Plato.* Chicago University Press. (London: Cambridge University Press.) 1956. Pp. 398. 12s. 6d.

Ed. T. V. SMITH. *From Aristotle to Plotinus.* Chicago University Press. (London: Cambridge University Press.) 1956. Pp. 293. 12s. 6d.

RUDOLF CARNAP. *Meaning and Necessity.* Second Edition, enlarged. Chicago University Press. (London: Cambridge University Press.) 1956. Pp. (x) & 258. 37s. 6d.

E. L. MASCALL. *Via Media: An Essay in Theological Synthesis.* Longmans, Green & Co. 1956. Pp. (xvi) & 171. 12s. 6d.

EMMANUEL MOUNIER. *The Character of Man.* Trans. by Cynthia Rowland. Rockliff. 1956. Pp. (x) & 341. 42s.

A. J. AYER. *The Problem of Knowledge.* Penguin Books. 1956. Pp. 224. 3s. 6d.

FYODOR DOSTOEVSKI. *The Grand Inquisitor on the Nature of Man.* The Library of Liberal Arts. New York. Pp. 47. 40 cents.

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THE ROYAL INSTITUTE OF PHILOSOPHY

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INSTITUTE NOTES

OBJECTS OF THE INSTITUTE

The Royal Institute of Philosophy was founded in order to promote the study of philosophy within the Universities and other educational institutions and also among the educated public generally. It pursues its aim by

(1) Organizing courses of lectures;
(2) Providing those of its members who wish for it with advice on philosophical reading;
(3) Publishing a quarterly journal, *Philosophy*, in which philosophical problems are discussed and new books reviewed.

Philosophy is a group of studies rather than a single one, and it has been pursued by different methods at different times. The Royal Institute of Philosophy interprets the term in a wide sense, so as to include ethics, aesthetics, metaphysics, the philosophy of religion, logic and the philosophy of science, the philosophy of history, political and social philosophy, and the philosophy of mind, and is not committed to any single school or method. The specialization which has taken place between the sciences and within them has made it desirable for scientists and philosophers to consider, from time to time, the relationships of the sciences to one another and to other aspects of human endeavour. Developments in psychology, psychiatry and social anthropology raise not only scientific and logical problems but also appear relevant to the ways in which men think about religion, morality and law, so that there is a constant need for unprejudiced and detailed inquiry into the precise points at which these developments are relevant and into the consequences which ought to be drawn. It is constantly desirable, too, that there be a renewal of our thinking on the questions of freedom and equality, authority and criticism, tradition and progress, which form the subject-matter of political philosophy. Persisting throughout all social changes is the deep-rooted metaphysical interest in the nature of the soul, its relation to material things, the origin of the world and the place of man in it—problems summed up by Kant as concerned with "God, freedom and immortality."

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The annual subscription to the Institute is £1 10s. Members receive the Institute's Journal, PHILOSOPHY, published quarterly, and may, of course, attend the Lectures.

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CENTRES

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The following Lectures will be given at 14 Gordon Square, W.C.1, at 5.30 p.m.:—

Lent Term, 1957

Friday, January 25th	"Plato's Theory of Ideas" Sir W. David Ross, K.B.E., Litt.D., LL.D., F.B.A.
Friday, February 1st	"Scepticism about Morals and Scepticism about Knowledge" W. H. Walsh, M.A. (Merton College, Oxford)
Friday, February 8th	"The Unpredictability of Man" Professor H. B. Acton (Bedford College, London)
Friday, February 15th	"Religious Doubt and Philosophic Doubt" Professor H. D. Lewis (King's College, London)
Friday, February 22nd	"Philosophy and Drama" D. Daiches Raphael, M.A., D.Phil. (University of Glasgow)
Friday, March 1st	"Some Leading Ideas of Whitehead's Philosophy" Sydney E. Hooper, O.B.E., M.A.
Friday, March 8th	"Ortega y Gassett and Philosophical Relativism" The Rev. F. C. Copleston, S.J., M.A. (Heythrop College, Chipping Norton)

ELECTION OF HON. TREASURER

At the Council Meeting held in October, Sir Edwin S. Herbert, K.B.E., LL.B., was elected Hon. Treasurer of the Institute.